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ABSTRACT

This handbook attempts to improve policy development and decision making relative to financing postsecondary education. Sections cover: (1) descriptions and comparisons of selected reports relative to recommendations for postsecondary financing; (2) position statements and/or comments on postsecondary financing from certain cooperative sponsoring groups for the conference series; (3) descriptions and critiques of possible usage for models in assessing postsecondary financing plans. Also included is a set of questionnaires that might be used in assessing financing proposals and existing financing programs. (Author/KE)

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A SERIES OF CONFERENCES

FINANCING POSTSECONDARY EDUCATION: POLICY DEVELOPMENT AND DECISION MAKING

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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Conference Handbook

September 1974

Higher Education Services
Education Commission of the States

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FOREWORD

The series of conferences for which this handbook provides background information are one outcome of the work of the National Commission on the Financing of Postsecondary Education. The Honorable Winfield Dunn, governor of Tennessee, served as a member of the national commission and encouraged it to rely on the assistance of the Education Commission of the States (ECS) in disseminating its reports. ECS chose a series of conferences as the method of dissemination.

In addition to Financing Postsecondary Education in the United States, a major report of the national commission, however, there have been a number of other reports, issued by several commissions and task forces, on policy directions and recommendations for the financing of postsecondary education. In response to the encouragement of several different groups during the conference planning stages, the conference series will benefit from multi-sponsorship and will consider other reports on postsecondary financing. Similarly, conference participants will represent varying points of view on postsecondary financing approaches.

The conference planners were also encouraged to expand the scope of the conference programs in order to give some attention to the broader economic context so that financing for postsecondary education might be viewed in relationship to other federal, state and local financing commitments. Current obligations and probable commitments for the immediate future will be considered.

Section I of this Conference Handbook provides descriptions and comparisons of selected reports relative to recommendations for postsecondary financing; Section II is a collection of position statements and/or comments on postsecondary financing from certain cooperative sponsoring groups for the conference series; and Section III contains descriptions and critiques of possible usage for models in assessing postsecondary financing plans. Also included in the handbook is a set of questions which might be used in assessing financing proposals and existing financing programs.

The Conference Handbook should be viewed only as a collection of information serving as background materials for conferees and other interested persons. Collectively it does not represent endorsements or positions of the cooperative sponsoring groups.

It is the hope of the many people who have planned the conference series that the conferences might serve as forums for discussion of postsecondary financing. Forum participants, who are from a variety of backgrounds and responsibilities, will present varying perspectives. Decisionmakers and educators from nearly every element of the postsecondary community will be represented.

General conference purposes are: greater empathy for the several perspectives that bear on postsecondary financing; attention to the broad economic context of which education financing is but a part; recognition of the alternatives available, in terms of financing proposals; and debate of possible consequences for the variety of policy directions. Accordingly, the conference sponsors and planners hope that the conference series and materials to be published might improve policy development and decision making relative to financing postsecondary education.

---Robert F. Corcoran

SPONSORSHIP

Several postsecondary education associations and agencies representing the public and nonpublic sectors, testing agencies, institutional and state budget officer associations, a student group, a faculty association and many individuals in government and education have contributed to the development and planning for the conference series. Their cooperative sponsorship includes contribution in terms of conference background materials to be circulated, suggested program and conference participants and substantive matters to be covered during the conference proceedings.

Funding for the conferences has been secured or tentatively committed from public and private sectors. Because some financial support for the conference series is tentative, announcement of final sponsorship will be made at the beginning of the conferences and will appear in follow-up publications.

The Education Commission of the States is the conference coordinating agency. Cooperative sponsoring groups are:

American Association for Higher Education
American Association of Community and Junior Colleges
American Association of State Colleges and Universities
American Association of University Professors
American College Testing Program
American Council on Education
Association for Institutional Research
Association of American Colleges
Association of American Universities
Association of Independent Colleges and Schools
Carnegie Council on Policy Studies in Higher Education
College Entrance Examination Board
Council of Graduate Schools in the United States
Institute for Educational Leadership, The Associates Program
National Association for Equal Opportunity in Higher Education
National Association of College and University Business Officers
National Association of State Budget Officers
National Association of State Universities and Land-Grant Colleges
National Association of Student Financial Aid Administrators
National Association of Trade and Technical Schools
National Board on Graduate Education
National Catholic Educational Association
National Center for Higher Education Management Systems
National Council of Independent Colleges and Universities
National Student Lobby
State Higher Education Executive Officers
U.S. Office of Education

CONFERENCE SCHEDULES

Sept. 30-Oct. 1, 1974	San Francisco, Calif.	Hyatt Regency
Oct. 4-5, 1974	South Bend, Ind.	Notre Dame Conference Center
Oct. 30-31, 1974	Denver, Colo.	Executive Tower Inn
Nov. 18-19, 1974	Atlanta, Ga.	Atlanta Internationale
Dec. 9-10, 1974	Boston, Mass.	Sheraton-Boston
Jan. 15-17, 1975	Washington, D.C.	Mayflower Hotel

SECTION I

This section has descriptions and implied comparisons of several major reports on varying aspects of postsecondary education. Those relevant aspects relating to financing are cited. The section, except for editorial changes, is drawn from a working paper compiled by Odille S. Hansen, Policy Analysis Services, American Council on Education.

I. Committee for Economic Development (CED)

REPORT FOCUS: Undergraduate education in the higher education (collegiate) sector.

SUMMARY: Reallocation of public resources emphasizing increases in grants directly to students. Increase tuition in the public sector; the added income would be used in the form of student aid to lower-income students for equalizing educational opportunities.

STUDENT ACCESS:

- There is a need to equalize educational opportunity for students from different income levels.

FINANCING POLICIES RELATING TO:

Tuition

- Public tuitions should be raised until they reach 50 per cent of the cost of instruction.
    - -Four-year institutions to phase tuition increase in five years;
    - -Two-year and technical institutions to phase tuition increase in 10 years.

Student Aid

- Student aid increases should precede tuition increases.
- Increased tuition income to be redistributed for student aid for students from low-income families.
- Grants and loans should be made directly to students.
- Federal government should expand the student loan system.
- Federal categorical support and state and local institutional support would be decreased; the resources would be diverted to student aid.

Institutional Aid

- Federal and state governments to fund special education programs through categorical grants to public and private institutions.
- State and local governments should contract with private institutions when public facilities are not adequate.

SHARED RESPONSIBILITIES BY:

Federal Government

- Funding should primarily be through grants and loans, made directly to students in accordance with their ability to pay.

- Should try to equalize education opportunities among the states.
- Provide, with state governments, categorical grants to public and private institutions for special education programs.
- Maintain existing tax incentives for voluntary support of postsecondary education.
- Expand student loan program.

State/Local Governments

- Contract with private institutions to provide education whenever public institutions are overburdened.
- Provide, with the federal government, categorical grants to public and private institutions for special education programs.
- Primarily provide general-purpose grants and appropriations to institutions.
- Increase emphasis on student grants.

Institutions

- Employ better management; utilization of modern techniques of long- and short-range planning.
- Establish long-range missions and goals; then build resources around these goals.
- Explore new modes of instruction, new timetables, alternative methods of degree granting, etc.

Students and Parents

- Increase reliance on student and parent payments from higher-income families, less reliance on student and parent payments from lower-income families.

SOURCE: Committee for Economic Development, The Management and Financing of Colleges (New York: Committee for Economic Development, 1973).

II. Carnegie Commission on Higher Education

REPORT FOCUS: Higher education (collegiate) sector.

SUMMARY: Federal share of support to postsecondary education should be increased. Supports graduated tuitions by level of student and increased tuition in the public sector. Increases in student aid and less tuition at the lower division would increase access.

STUDENT ACCESS:

- Financial barriers to higher education should be removed by:

  -Fully funding the Basic Educational Opportunity Grants (BEOGS);

  -Substantially increasing student aid;

  -Tuition should be graduated by level of student in order to:
  a. Promote universal access;
  b. Make the lower division more accessible to students;
  c. Make tuition fees roughly proportionate to actual costs of education.

FINANCING POLICIES RELATING TO:

Tuition

- Four-year public institutions should raise tuitions until they equal one-third of the cost of instruction; this goal should be reached within 10 years.

- No change in tuitions of two-year public institutions. Public institutions--and especially the community colleges--should maintain a relatively low-tuition policy for the first two years of higher education.

- Private institutions to increase tuitions no faster than per capita disposable personal income. Private institutions would be aided by the states in order to narrow the tuition gap between publics and privates.

- Tuition differentials of 1:1.5:3 for lower-division, upper-division and graduate levels, respectively, are anticipated.

Student Aid

- Basic Educational Opportunity Grants (BEOGS) should be:
  - -Fully funded;
  - -Funded to cover 75 per cent of cost of instruction for qualified lower-division students;
  - -Gradually increased as to ceiling.

Institutional Aid

- Recommend state aid to private institutions in the form of capitation grants.

SHARED RESPONSIBILITIES BY:

Federal Government

- Substantially increased funding--to 50 per cent of public financing of postsecondary education.
- Support student aid programs, such as EOG, CWS, NDSL and an expanded BEOGS program.
- Create a National Student Loan Bank.
- Take greater responsibility for supporting research and graduate education, which would be restricted to a limited number of institutions.
- Support innovation in higher education by funding the National Fund for the Improvement of Postsecondary Education and the National Institute of Education.
- Promote interest in postsecondary education--e.g., by expanding national service programs and improving education opportunities in the military services.

State/Local Governments

- Increase support of postsecondary education to one per cent of state personal income (on a national average basis).
- Provide financial support to both public and private sectors.
- Coordinate postsecondary education--e.g., differentiation of functions, diversity and specialization of institutions.

Institutions

- Hold the rise in costs per student to increases in per capita disposable income.
- Improve productivity.
- Phase out old projects if new, better ones can be developed.

- Halt the creation of new Ph.D. programs; concentrate training of Ph.D.'s at limited number of institutions with adequate resources.
- Study/implement new techniques as accelerated degree programs, year-round operations, etc.

Students and Parents

- Graduate and modest redistribution of the burden of postsecondary education financing--i.e., greater share of support would be borne by more affluent students and families.
- Students should get broad general education, explore nonvocational interests and obtain work and service experiences as well as academic training.

SOURCES:

Carnegie Commission on Higher Education, Priorities for Action: Final Report of the Carnegie Commission on Higher Education (New Jersey: McGraw-Hill Book Company, 1973).

Carnegie Commission on Higher Education, The More Effective Use of Resources: An Imperative for Higher Education (New Jersey: McGraw-Hill Book Company, 1972).

Carnegie Commission on Higher Education, Higher Education: Who Pays? Who Benefits? Who Should Pay? (New Jersey: McGraw-Hill Book Company, 1973).

Carnegie Commission on Higher Education, Tuition, A supplemental statement to the report of the Carnegie Commission on Who Pays? Who Benefits? Who Should Pay? (New Jersey: McGraw-Hill Book Company, 1974).

III. The Second Newman Report

REPORT FOCUS:	"Federal" focus of postsecondary (collegiate and noncollegiate) education.
SUMMARY:	Institutions, public and private, should be made competitive with each other for students and resources. Institutions should develop clear objectives and relate resources to the objectives.
STUDENT ACCESS:	● Postsecondary education should be made available to all segments of the population--minorities, women, students beyond the traditional college age and students with limited incomes. The federal government should: -Provide national graduate fellowships for talented minority students; -Support black and other ethnic colleges; -Provide financial assistance programs and incentive grants programs for women; -Finance a study and program development on the financing of students during recurrent periods of education.

FINANCING POLICIES RELATING TO:

Tuition	● No specific recommendations endorsed.
Student Aid	● Tuition differential between public and private institutions should be bridged by student aid. ● Twenty per cent of work-study funds should be allocated to institutions on an incentive basis to upgrade the work experience of students.
Institutional Aid	● No specific recommendations endorsed.

SHARED RESPONSIBILITIES BY:

Federal Government	● Maximize the incentives for institutions to compete with each other--in order to improve. ● Support should be through students rather than through institutions to maximize institutional competition and student choice. ● Emphasize work-study and internship. ● Fund a "G.I. Bill for Community Services" to stimulate a break in the educational lockstep. Postsecondary education credit would accrue for service experience.

- Support of graduate education should be in the form of portable fellowships directly to students with companion grants to institutions they choose to attend.

- Programs should be developed that aid state agencies and encourage autonomy, such as:

    -Providing funds for state scholarships and fellowship programs;

    -Providing partial support for innovative education programs in public and private institutions (approximating one per cent of the state's support for postsecondary education).

- Encourage states to develop strategies for accountability that rely on competitive forces and incentive approaches rather than on the management of institutions.

- Efforts should be made to equalize education opportunities for minorities, women, students beyond the traditional college age and students from low-income families.

- A new statistical agency should be created, and the data collection and analysis function should be upgraded.

- Experimental, interdisciplinary research in cost-effectiveness should be supported.

- A more vigilant antitrust posture relative to the activities of the organized professions should be adopted.

- The process of determining eligibility for federal funds should be separated from the process of judging institutional performance.

- Philanthropy through the tax structure should be encouraged.

- New methods of student evaluations should be funded:

    -Develop ways of evaluating mastery of proficiencies;

    -Establish examining agencies for awarding credentials for proficiencies acquired outside institutions of postsecondary education.

State/Local Governments	• No specific recommendations endorsed.
Institutions	• Develop clear objectives--competition for students and resources would then be based on the effectiveness of the education programs.
Students and Parents	• No specific recommendations endorsed.
SOURCE:	Report of a Special Task Force to the Secretary of Health, Education and Welfare, The Second Newman Report: National Policy and Higher Education (Cambridge: The M.I.T. Press, 1973).

IV. National Board on Graduate Education

REPORT FOCUS: Graduate education.

SUMMARY: The national board discusses the issues facing graduate education and concentrates on the federal role in its support.

STUDENT ACCESS:

- Conditions must be created to remove barriers to assure access to graduate education for minority members, women and older students, as well as the availability of financial resources and types of environments that provide reasonable opportunities for program completions.

FINANCING POLICIES RELATING TO:

Tuition

- Should be maintained below the full cost levels.

Student Aid

- Recommended federal fellowships for the 1970s:

  -Portable three-year fellowships awarded on the basis of merit for doctoral study in any academic discipline.
  a. Two thousand awards per year (500 of which are currently being awarded by the National Science Foundation);
  b. A cost-of-education allowance would accompany each fellowship; the allowance to be accepted in lieu of tuition;
  c. Total cost of 6,000 awards at $3,500 per fellowship and $4,500 per cost-of-education allowance is estimated at $48 million;

  -Traineeships for students in programs oriented toward such urgent social problems as energy, health care and mass transportation; support funds to be awarded competitively to institutions, with institutions in turn awarding the traineeships to students.
  a. Five-year grants should be provided to institutions to develop programs;
  b. Phase in at 70 grants per year for a three-year period until reaching 200 projects. This would ultimately cost $60 million/year at $300,000 per project on average;

  -Continue NIH and NIMH training grant programs;

  -Provide aid to students from historically disadvantaged minority groups.

- Loans, rather than BEOG-type assistance, to graduate students needed. Loan limitations to be increased to $15,000 with repayment period of 20 years.

- Teaching and research assistantships should be maintained at current levels.

Institutional Aid

- Should be the primary responsibility of the states and private sector. Federal support recommended by three channels at graduate level:

  - Cost-of-education allowances accompanying federal fellowships;

  - Funds accompanying the new manpower and research training grants focused on national problems;

  - NSF and NIH funds supplementing research project grants to be continued at a combined level of approximately $70 million currently with modest growth accompanying growth in project research.

SHARED RESPONSIBILITIES BY:

Federal Government

- Should continue its appropriate role in financing graduate education and research, but should not replace state and private support.

- Avoid major and abrupt shifts in support for graduate education and research; policy changes should be phased in over time and coordinated with states and institutions.

- Support for basic research should grow at least at the same rate as the Gross National Product.

- Whenever mission-oriented agencies reduce their support for basic research, other agency budgets (such as the National Science Foundation and the National Foundation for the Arts and Humanities) should offset such reductions.

- Stress the need for coordinated efforts at the federal level for data collection, dissemination of information and research on graduate education.

- Create a Joint Education Committee in Congress similar to the Joint Economic Committee.

- Student support needed (e.g., in the form of competitive fellowship programs) to insure academically qualified students access to graduate education.

- Coordinate with institutions an effort to increase access and program completions of minority students and women.
- Avoid overreaction to current labor market analyses and support developments of more accurate methods of manpower forecasting.

State/Local Governments

- Maintain continuing responsibility for institutional support.
- Evaluate current graduate programs and avoid instituting duplicative programs.
- Review existing programs on the basis of need, quality and output. Avoid program evaluations on the basis of single quality measures and/or simplistic numerical formulas.

Institutions

- Should not simply respond to problems and external demands, but should assess their own performance and seek new opportunities for change.
- Institutions should insure the continuous flow of young faculty members into academic departments--should explore such avenues as early retirement and changes in tenure concepts.
- Orient Ph.D. training toward the nonacademic professions.
- As community colleges absorb Ph.D.'s for faculties, institutions should evaluate their programs in order to meet the needs of two-year colleges.

Students and Parents

- No specific recommendations endorsed.

SOURCES:

National Board on Graduate Education, Federal Policy Alternatives Toward Graduate Education, January 1974.

National Board on Graduate Education, Doctorate Manpower Forecasts and Policy, November 1973.

National Board on Graduate Education, Graduate Education: Purposes, Problems and Potential, November 1972.

V. National Commission on the Financing of Postsecondary Education

REPORT FOCUS: "National" focus of postsecondary (collegiate and noncollegiate) education.

SUMMARY: The commission assembled pertinent data on postsecondary education in the United States and used them to analyze alternative financing policy proposals in a systematic way.

STUDENT ACCESS:

- Expressed concern that:

  -The participation rate for students from families with annual incomes under $10,000 is about 50 per cent of that of students from families with incomes over $10,000. Students from families with incomes ranging from $6,000 to $7,500 are most underrepresented.

  -The participation rates of Blacks, American Indians and Mexican-Americans are exceptionally low.

  -The participation rate of women would have to be increased by 25 per cent to be equal to that of men.

FINANCING POLICIES RELATING TO:

Tuition, Student Aid and Institutional Aid

- Federal, state and other policymakers for postsecondary education should use an analytical framework for assessing the impacts of alternative financing proposals similar to that described in the national commission report.

- Research and development of analytical frameworks similar to the commission model is strongly recommended.

- Financial information for the entire postsecondary education enterprise should, in the future, be collected and reported on a timely basis and in a systematic fashion by the federal government in close cooperation with the states.

- National standard indicators should be developed to determine the relative financial status of the different types of postsecondary education institutions (the commission suggests a number of such indicators for consideration).

- When there are substantial shifts in public financing of specific programs, they should be effected over a reasonable period of time. Appropriating funds for all education programs one year in advance of spending would be especially helpful.

- The programmatic interrelationships among research programs, graduate education and undergraduate education should be studied so as to understand better the induced financial effects of individual program financing decisions on an institution.

- Grants and contracts with institutions of postsecondary education either should include long-term programmatic support that recognizes the interrelationships among the various functions of the institution or should cover the costs associated with purchasing the service as if it were provided separately from other functions within the institution.

SHARED RESPONSIBILITIES BY:

Federal Government, State/Local Governments, Institutions and Students and Parents

- The commission adopted eight objectives for postsecondary education in the United States considered necessary in the evaluations of alternative financing proposals. The commission objectives and recommendations include:

  -Student Access: Each individual should be able to enroll in some form of postsecondary education appropriate to that person's needs, capability and motivation.
  a. The participation rate of students from families with annual incomes under $10,000 would have to be increased by 50 per cent to equal the participation rate of students from families with annual incomes over $10,000;
  b. Students from families with incomes in the $6,000- to $7,500-range are the most underrepresented group and have received little financial assistance;
  c. The rates of participation for Blacks, American Indians and persons of Mexican parentage or birth are far below participation rates of the remaining population groups;
  d. Participation of women would have to be increased by 25 per cent in order to equal that of men.

  -Student Choice: Each individual should have a reasonable choice among those institutions of postsecondary education that have accepted him or her for admission. If the student is admitted to a high-tuition and a low-tuition institution, he should have a reasonable choice between the two institutions regardless of personal financial situation.

-Student Opportunity: Postsecondary education should make available academic assistance and counseling that will enable each individual--according to his or her needs, capability and motivation--to achieve his or her educational objectives. Though program completion rates are not very satisfactory measures of this objective, low-income and Black students presently have lower completion rates.

-Institutional Diversity: Postsecondary education should offer programs of formal instruction and other learning opportunities and engage in research and public service of sufficient diversity to be responsive to the changing needs of individuals and society.

a. Greater diversity is essential if postsecondary education is to serve fully the varied needs of students;
b. Postsecondary education should be expanded beyond the traditional higher education sector to include all forms of learning opportunities beyond secondary education. Data should be collected on those sectors of postsecondary education other than the collegiate and noncollegiate sectors;
c. The following definition should be adopted in the discussion of financing policies: "Postsecondary education consists of formal instruction, research, public service and other learning opportunities offered by educational institutions that primarily serve persons who have completed secondary education or who are beyond the compulsory school attendance age and that are accredited by agencies officially recognized for that purpose by the U.S. Office of Education or are otherwise eligible to participate in federal programs."

-Institutional Excellence: Postsecondary education should strive for excellence in all instruction and other learning opportunities and in research and public service. There presently is no adequate measure of excellence; additional search for adequate measurements is needed.

-Institutional Independence: Institutions of postsecondary education should have sufficient freedom and flexibility to maintain institutional and professional integrity and to meet creatively and responsively their education goals.

-Institutional Accountability: Institutions of postsecondary education should use financial and other resources efficiently and effectively and employ procedures that enable those who provide the resources to determine whether those resources are being used to achieve desired outcomes.

a. Independence and accountability must be balanced so that the interests of students and the general public do not become subordinated to those of the institutions;

b. The federal government should provide continuing leadership in encouraging and developing national standard procedures appropriate to each type of institution for calculating the direct, indirect and full annual cost of instruction per student by level and field of study;

c. Interim national standard procedures for calculating those costs per student should be adopted by the federal government to be implemented by institutions on a voluntary basis. Cooperating institutions should receive financial assistance to cover costs related to implementation of the interim procedures and reporting their cost information;

d. Federal support should be provided for the development and reporting of financial and program data to supplement and extend the cost-per-student data;

e. The federal government should ensure that the data base assembled by the commission is updated, maintained and made available to appropriate public and private agencies;

f. The federal government should support a national center for educational information.

-Adequate Financial Support: Adequate financial resources should be provided for the accomplishment of these objectives. This is a responsibility that should be shared by public and private sources, including federal, state and local government, students and their families and other concerned organizations and individuals.

a. State and local governments should provide the basic institutional capability to offer a variety of postsecondary education programs and services according to the needs of their citizens;

b. The federal government should accept major responsibility for financing postsecondary education programs that serve goals and priorities that are primarily national;

c. Students and their families should share in meeting the basic costs of their education to the extent of their ability to do so and to ensure their freedom to choose among programs and institutions;

d. Alumni, foundations, corporations and other private organizations and individuals should provide the supplementary support that traditionally has been a principal ingredient in assuring high quality among both private and public institutions.

SOURCE: National Commission on the Financing of Postsecondary Education, Financing Postsecondary Education in the United States (Washington: U. S. Government Printing Office, December 1973).

SECTION II

This section is a collection of responses representing association positions and/or comments from association officials relative to postsecondary financing. The associations were invited to provide, in brief, reaction to the reports in Section I as well as other reactions they might care to offer.

AMERICAN ASSOCIATION OF COMMUNITY AND JUNIOR COLLEGES

THE COMMITTEE ON FINANCING

A coordinated system of finance recognizing all elements of higher education is necessary. However, our assignment is to recommend guidelines for public support of the types of institutions that make up the membership of the American Association of Community and Junior Colleges.

We endorse the view that since there are different levels of social needs and varying institutional costs, there should be different levels of public responsibility with respect to higher education at the lower-division, upper-division and graduate levels.

We reaffirm our belief in extending educational opportunity until it is universally available to the associate degree level. The diverse opportunities and resources of both public and private institutions should be utilized to achieve this universal access.

We believe in the wisdom and value of the diversity of state patterns that have emerged from various local traditions and state planning efforts.

We see these elements in our environment for the next few years: (1) a growing student population made up of persons of an increasing diversity of ages, incomes and interests since all persons in the community are potential students; (2) a growing demand for additional programs, especially in the occupational and continuing education areas.

Finally, we agree that responsibility for financing postsecondary education should be shared by a combination of public and private sources. Among the sources that should be used--in different combinations and in different ratios in the various states and in various institutions--

are federal, state and local governments and private sources, including individuals and organizations.

Against this background, we make these recommendations:

(1) Student tuition in publicly supported community colleges should remain low and, where possible, there should be no tuition charged as is the case in California where more than one-fourth of the students in the nation's community colleges are enrolled. Tuition in privately supported junior colleges may, of necessity, be higher than tuition in public colleges but should not be prohibitive to middle-income groups.

(2) Local and state contributions to publicly supported community colleges should continue to carry the primary burden of supporting these community-based institutions. The patterns of local and state support vary among the 50 states because each state has worked out its own system and this is as it should be. The important thing is that each state's pattern should be based on careful study of its resources and needs and a master plan developed with broad participation in the planning activity.

(3) Among the resources that should be taken into account in state plans are the existing privately supported junior colleges. Local and state funds should be available to help support services offered to the public by the private sector where such action can avoid unnecessary duplication.

(4) Community colleges are distinctly community service institutions and, as a first priority, should be closely identified

with their localities. Recognizing the desirability of state planning and of accountability to multiple sources of support, it is fundamental to the nature of the institution that control remain as close to the community as possible.

(5) Federal support of community and junior colleges should be in the nature of additional resources, over and above the base support provided by local and state governments, with special emphasis on strengthening institutions through institutional grants and increasing access for low-income families through grants directly to students.

(6) Individuals and organizations should be encouraged to make private contributions to those institutions that they feel merit their support. Special attention should be given to those institutions that depend on private support for their financing. Such contributions will not only aid a particular institution but also help preserve a needed diversity in our national system of higher education.

(7) It is important that all patterns of support be carefully planned to facilitate, not impede, the mission of the institution. Thus, it is essential that each institution invest the necessary effort to assess community needs and to precisely delineate its goals and objectives and communicate them accurately to the public.

(8) All funding patterns should be structured to encourage the development of improved management techniques in both public

and private institutions, including adequate measurement and reporting of outcomes. We recognize our accountability as a desirable requirement in order to enjoy public confidence and support.

(9) Better measurements are needed of costs, services performed and results achieved. Present statistical measures often do not reflect the mission of community colleges and they are inappropriate for analyzing financial needs. Models of new data systems are being developed but they require a sizable financial investment to become fully operative. Such investments should be made at institutional, state and federal levels in the interests of improving the financing of postsecondary education.

(10) Differentials in program costs in community colleges should be recognized in funding patterns but they should not be passed on to students. Students from low-income families should not be prohibited from enrolling in high-cost curricula. Occupational programs and community service functions fit the distinctive community-based mission of our institutions. These programs and services are rapidly expanding in enrollments. They should be funded on a basis that recognizes their equal importance with transfer and general education courses.

(11) The concept of universal opportunity for 14 years of education must take into account that many persons should have access to community-based postsecondary education without regard to the timing of that education in a person's life. Patterns of financial support should encourage these colleges to offer

appropriate services to all ages of adults and encourage all ages to participate.

(12) Financing procedures should be structured within each state so that resources reach the institutions by the most direct route possible consistent with efficient state planning and coordination.

AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES

"Financing Reports and the Attack on Low Tuition"

The Carnegie and CED Reports

Federal and state policymakers reviewing the financing recommendations of the Carnegie Commission and the Committee for Economic Development (CED) should be clearly aware that many of these recommendations are highly controversial. These reports are not seen by their critics merely as scholarly publications or as objective or scientific approaches to better decision making. Rather, they are viewed as both political and ideological--based heavily on the value judgments previously held by their sponsors rather than on evidence rising out of the studies--and definitely intended to influence public policy at all levels.[1]

To be sure, there are differences between the CED recommendations for doubling and tripling tuition at public colleges and community colleges and the more moderate Carnegie recommendations. But the effect in both instances is to add to existing political and fiscal pressures in the states and at the federal level to raise tuition.

The effect would be to shift a considerably larger part of the financial burden of higher education to the student and his family. Millions of middle-income families--and median American income is now around $12,000 a year--would be hard hit. So would most working-class families in the $7,500 to $12,000 category. While Carnegie and CED recommend more student aid to help low-income families, there is no certainty that this would be provided--in which case low-income and disadvantaged families would suffer greatly.

Higher tuition would hurt millions of part-time students trying to work their way through college--and there are now many more part-time than full-time students, especially at public colleges. Women, who often do not have the chance for college now, would be especially discriminated against.[2] So would many older people seeking a second chance.

Most high-tuition proposals include plans for long-term, expensive debt repayments through some form of "student loan bank" or contingency repayment system. Such systems could involve millions of American families in the repayment of lifetime debts running to many tens of thousands of dollars.

Such plans involve a form of discrimination which would set middle-income and working-class families against the poor as well as the well-to-do, in what The New York Times has called "a class war over tuition." If the plans worked as intended, the poor and the well-to-do would have their way paid through college and graduate without debt--while middle-income and working-class students would pay much more and graduate with large debts.

Most spokesmen for public higher education--the land-grant universities, state colleges and community colleges which enroll about three-fourths of all college students--have opposed the Carnegie and CED recommendations on tuition. So have groups which represent most private colleges and universities--the American Council on Education and the largely private Association of American Colleges. Opposition has also come from many newspapers, ranging from The New York Times to the Minneapolis Star.

Leaders of organized labor have spoken out strongly against proposals that would affect the life chances of millions of working-class people. They would like to see a campaign, by labor unions and other interested groups, in every state against higher tuition. The National Education Association has also opposed these ideas; so have spokesmen for women, minorities, students and others.

A full rebuttal of the Carnegie and the CED reports is not possible in this brief paper; the reader is referred to the papers listed in the bibliography by the American Association of State Colleges and Universities (AASCU), Howard Bowen, Carol van Alstyne and others.

However, one final comment is in order at a conference on state financing of higher education. The Carnegie and CED recommendations--like the assumptions in the national financing commission model discussed below--are based in good part on the belief that there will not be enough additional resources to pay for the rising costs of education, without charging middle-income and working-class students much more. Economists Howard Bowen and Carol van Alstyne disagree strongly with this "depression mentality." They point out that many states are now relatively well off financially, that state expenditures for higher education are rising and that resources are indeed available at both the state and federal levels.

The National Commission: The Limits of Modeling

> A policymaker and a designer of analytical models are trapped in a jungle. Behind them is a sheer drop of 400 feet, on their right a charging rhino and on their left an angry lion.
>
> "Well, I guess this is the end," said the policymaker.
>
> "Not at all," said the model-designer. "Assume a helicopter."

This anecdote illustrates in a way the quite different problems posed by the report of the National Commission on the Financing of Postsecondary Education, problems which relate to data and assumptions rather than to explicit recommendations.

The analytical model on financing, which is a major element of the report and has probably received most attention, led the commission to "generalizations" about tuition and student aid. These generalizations have been widely publicized and, for many readers, probably have the force of recommendations.

The generalizations, as well as the model and other parts of the report, have been the subject of much controversy since the report was released. Like Carnegie and CED, the report has not been received as a mere scholarly document or helpful management tool.[3]

For example, the report was strongly attacked in a lengthy letter by then U.S. Commissioner of Education, John Ottina, himself an authority on systems analysts and management in his report to Congress.[4]

Technology Management Incorporated, a Washington consulting firm which specializes in analytical models, wrote a scathing attack for the Office of Education urging that "the model be removed from any computer system to prevent its use by people who lack understanding of models and their limitations."

The Technology Management report continued,

> The commission did not really understand the use of a model as evidenced by its naive view of an "ideal" use of a model, by its overemphasis upon the model and by its failure to identify the research results, i.e., the enrollment impact of net student charges instead of the model, as being significant to public policy.
>
> The description of model purpose, structure, limitations, input data and output results did not meet standards for publication in a professional journal.

Dr. Lyman Glenny of the University of California, in a report to the Education Commission of the States, was also very critical. Dr. Glenny, an authority on higher education research and financing, raised many doubts about the data upon which the model was based, the "literally hundreds of assumptions and arbitrary adjustments" that must be made in such a model (few of which are explained in the report), the mathematical techniques used, the particular enrollment projections, the ignoring of a downturn in college enrollment over the past several years and other factors. Nevertheless, as Dr. Glenny points out, the report then provides "generalizations" about student aid, tuition, enrollment, institutional aid and so on, drawn from this "simplistic mathematical model."

If the report and the model were only intended as examples of a new methodology, clearly identified as a purely scholarly exercise, and with all of the assumptions, data sources and so on carefully spelled out, there could be no objections. But the report, following closely upon the Carnegie and CED efforts, emphasized generalizations which strongly suggest a higher-tuition policy. Further, these generalizations are being offered to federal and state policymakers who have little experience with models or with the educational research upon which this one is based.

The national commission report has also been criticized, especially by Commissioner Ottina and spokesmen for higher education, for the implications of its chapter on a national uniform costing system, possibly as leading to unwarranted federal control. Critics have also attacked the chapter on college financial distress as overly optimistic and not justified by the data presented.

A nationwide campaign is apparently now under way to persuade state higher education policymakers to use analytical models, a campaign somewhat like that for the adoption of system analysis and program planning budgeting system approaches a few years ago. The National Center for Higher Education Management Systems plans to test out a model very similar to that of the national commission in four states; the RAND Corporation, with the assistance of the study director for the CED report, is working on another model. The Office of Education and National Science Foundation are helping to fund these efforts; more models are rumored to be on the way.

No one can object intellectually to efforts to apply models and similar analytical tools to decision making. But every practical policymaker needs to be aware of the dangers of "assuming a helicopter." The national commission model makes several assumptions which--given our present state of knowledge about higher education--could be very dangerous if acted upon.

Among these dangerous assumptions:

- That we can guarantee adequate student aid in every state to make up for any increases in tuition so that neither middle-class nor poorer students will be hurt. (This underlies the national commission model as it does the Carnegie and CED reports.)
- That many students will not drop out of college if faced with much higher costs and/or large debts. (This underlies Carnegie and CED and to a lesser extent the national commission model and is highly questionable as the basis of present evidence and economic theory.)
- That we know how students will decide on college if faced with a range of alternatives involving costs, possible student aid and other factors. (Some very limited and dated information on student behavior underlies the national commission, NCHEMS and RAND models. Specialists on student choice, like some at the American Council on Education, are very skeptical of this data--most of it coming from one very limited 1966 sample.)
- That only a limited amount of money is available for higher education, and additional student aid must be provided (and perhaps _can_ be provided) only by raising tuition. (This underlies some assumptions of the national commission model.)

Models, like other analytical and mathematical tools, can serve us in real-world situations only to the extent that they correspond to the real world. Two examples help bring this home.

The first is the brilliant portrait in Halberstam's _The Best and the Brightest_ of Defense Secretary Robert MacNamara, one of the fathers of modern systems analysis, sitting at his desk year after year analyzing statistics on the Vietnam war, deciding that we were winning and rejecting the practical judgments of military, intelligence and diplomatic experts who kept telling him that we were losing. The tragedy of MacNamara and to some extent of the whole Vietnam war was--in part--the triumph of abstract analytical approaches over practical political judgment and readily available information.[5]

The second example is that of modern economics and its apparent failure so far either to predict the current economic crisis or to help policymakers find a way out of it. Even with excellent data and many years of research by a large and highly skilled group of professionals, economic analytical techniques--including modeling--have had relatively little success in recent years either in predicting real-world developments or helping to resolve them.

Modeling efforts in higher education are far more recent than those in economics, based on very limited data and experience, and so far have involved very few professionals. Indeed, Lyman Glenny and the Technology Management Incorporated firm are among the few experts who have even reviewed the national commission report. Given all this, policymakers should be very cautious indeed in making decisions which would have a profound effect on the lives of millions of Americans.

Conclusion

Federal and state policymakers will have to continue to make hard social and political judgments about financing higher education. As they weigh the reports of Carnegie, CED and the national commission, as well as those which will come from the new analytical models, they will have to consider the real-world implications.

They will have to view suggestions to "substitute student aid for low tuition" and ask whether there is any guarantee of adequate student aid from the federal or state levels. And, like Representative James O'Hara of Michigan, they will have to ask whether higher education should be turned into a "welfare system," or perfected as a system open to all who can benefit from it--a system based on low tuition and adequate student aid for the poor.

They will have to think about the needs of middle-income and working-class students as well as the poor and about older and part-time students. They will have to ask whether opportunity can be expanded only by reallocating existing funds away from the middle class and working class or whether total state and federal support can be increased. Finally, they will have to ask themselves whether they really want to try to saddle all future generations with very large debts.

In short, they will have to act like policymakers--and political practitioners in a democracy. We hope and believe that they will not decide to abandon the priceless American heritage of low-tuition public higher education.

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1. AASCU, *Financing Postsecondary Education: The Case for Low-Tuition Public Higher Education*, October 24, 1974.

   Howard Bowen, *Financing Higher Education: The Current State of the Debate*, Association of American Colleges, 1974.

   Carol van Alstyne, *An Economist Looks at Low Tuition*. Part of a forthcoming book of papers on low tuition to be published by the American College Testing Program, Iowa City, fall, 1974.

2. See *Women's Stake in Low Tuition*, forthcoming from AASCU, fall, 1974.

   Other pamphlets on the importance of low tuition to labor, minorities, rural America, businessmen and taxpayers are being planned.

3. AASCU, *Staff Paper on the Report of the Postsecondary Financing Commission*, May 1, 1974.

   Lyman Glenny, "Brief Analysis," Education Commission of the States, February 12, 1974.

4. Part of the Ottina letter and Technology Management Incorporated critique appear in *Higher Education and National Affairs*, American Council on Education, April 12, 1974.

5. David Halberstam, *The Best and the Brightest*, (New York: Random House, 1972.) See especially pp. 247-250 and 348-349.

Two new papers on modeling in postsecondary education appeared after this paper was written. Both of them, and especially the paper by Dresch, are very critical of most current models and especially of the NCHEMS and RAND models. Both feel that our present knowledge about student choice and price is too rudimentary at present for policymakers to make decisions based on models. The papers are:

Stephen P. Dresch, *Comprehensive Planning Models for Postsecondary Education: Current Feasibility and Potential Relevance*, Yale University, Institution of Social and Policy Studies, Aug. 1, 1974.

Carol van Alstyne and Steve Downs, *A Survey of Models of College Student Choice*, American Council on Education, forthcoming, fall, 1974.

AMERICAN COUNCIL ON EDUCATION

The American Council on Education (ACE) has expressed its concern in recent months on a number of issues of public policy regarding postsecondary education. In the statement of goals in Federal Programs in Postsecondary Education, an Agenda for 1975, the American Council on Education affirms that "public policy for postsecondary education should be guided by six principles.

(1) Access to a variety of advanced-learning options should be available to all individuals seeking further education, at any point in life.

(2) Institutions should develop practices which will alleviate the discriminatory effects of past policies in the hiring, promotion and dismissal of staff.

(3) Constant vigilance should be maintained to defend and preserve the concept of academic freedom.

(4) Through constant self-analysis, postsecondary education should respond to society's changing needs and values.

(5) Quality and effectiveness should be maintained and extended in performing all of the many functions of postsecondary education.

(6) Every way possible should be investigated to provide postsecondary education at a price people can pay.

"Attainment of the goals requires awareness, leadership and wide participation. Such attributes must be found in the institutions and their constituencies. However, they also require funds, and in this connection the following principles are important:

(7) Further expansion of a multisource system for financing postsecondary education is needed.

(8) Continual encouragement should be given to private, philanthropic support for the entire system of postsecondary education through equitable tax laws.

(9) Stability, rather than sudden shifts, in funding patterns must be sought."[1]

Within the last few years, a number of important task forces and commissions were formed to study various phases of postsecondary education. The reports of these groups have made recommendations on critical issues of national significance including the financing of postsecondary education. In comments to Congressmen Brademas and Dellenback, in April 1974, on the report of the National Commission on the Financing of Postsecondary Education, ACE noted that even though "the decision not to recommend specific financing proposals has been disappointing to many," the council believes that "the commission's general strategy may have been sound. It was probably wiser to recognize the complexity of the issues, the inadequacy of existing models and the paucity of data--and to propose concrete steps towards the rectification of these conditions--than to have tried to lay down a far-reaching legislative platform within so brief a period and without adequate analytical support. The distinctive nature of the commission's legacy, however, presents a sharp challenge to postsecondary education and its governmental counterparts. Means must be devised to develop further the conceptual framework of objectives, issues and options--as well as the analytical tools for evaluating policy alternatives--looking to the formulation of long-term plans and implementing legislative programs."[2]

One major issue which has been raised in the various reports on postsecondary education finance is that of tuition levels for public institutions. On this issue, the American Council on Education has taken a position: "The

American Council on Education is deeply committed to two fundamental goals. The first is the societal goal that all those seeking postsecondary education have access to a broad range of opportunities; the second is an educational goal to assure high quality postsecondary education in America through the healthy coexistence of public and private institutions....Along with the public sector, private postsecondary education is contending with staggering financial burdens induced by inflation, the energy crisis and limited sources of revenue. In this context of financial need, tuition increases in public institutions have been proposed as a means of assisting private institutions, through reducing the competitive disadvantage of private institutions in attracting students. ACE does not believe that accelerating the rate of increase in tuition will have the predicted effect. Its effect will be to heighten the financial barriers to education for everyone, but particularly for the student from middle-income families. The predictable net result of increased financial barriers will not be a shift of enrollment to private but a decrease in ease of access to all."[3]

Two issues raised in the report of the National Commission on the Financing of Postsecondary Education, which have been of concern to the postsecondary community, are the use of models in policy making and the use of national standard procedures for cost analysis. Regarding the first issue, the council believes that "The development of usable policy models requires the continuous interaction of users of the model for making decisions with the technical specialists who constructed the model. With respect to the commission's model this process has just begun. Further development of the model should proceed with the assistance of two separate advisory groups--one technically and one policy oriented--each with quite different types of expertise."[4]

Specific steps recommended for further development of the model are outlined in Appendix B to the ACE reply to Congressmen Dellenback and Brademas ("National Commission Model: Next Steps").

In terms of national standard procedures for determining per-student costs, ACE grants the need to improve the "credibility" of institutions of post-secondary education regarding resource use, but "there are effective means to satisfying this need that are far more likely to serve important institutional and public purposes than the particular cost-analysis procedure recommended by the commission....With respect to the specific cost-analysis procedures recommended by the commission--a system developed by the National Center for Higher Education Management Systems (NCHEMS)--ACE indicated...a willingness to support an 'interim' voluntary program which emphasized further development, testing and evaluation."[5]

The ACE response in February 1974 to the report of the National Commission on the Financing of Postsecondary Education noted that the Carnegie Commission, the two Newman Task Forces, the Committee for Economic Development, the National Board on Graduate Education and numerous individuals have together created a massive literature of critical evaluation and policy formulation. "So great has been the profusion of analysis and advice, in fact, that the several communities of postsecondary education have scarcely begun to appreciate its collective purport--much less to make systematic use of it for policy and planning purposes. The addition of the national commission's final report to this impressive body of analytical material and the prospective revisions next year of the Education Amendments of 1972 make imperative an informed national discussion of the issues raised the the recommendations proposed in these reports. The American Council on Education hopes to contribute both to the planning and to the continuing course of this discussion."[6]

The American Council on Education appreciates the opportunity to participate in cosponsoring this series of regional conferences on financing postsecondary education with the Education Commission of the States, a distinguished group of national and state level postsecondary education associations and the U.S. Office of Education, in that these conferences can form a significant part of this "informed national discussion" which we believe is needed for the continued vitality and support of postsecondary education in our society. The council believes that in this discussion we should give serious consideration not only to improvements in existing systems and programs but also to a wide range of new alternative directions. To this end, the council has been sponsoring a series of seminars in the spring and summer of 1974 at which a number of new proposals have been critically reviewed. Examples of these are a plan for no/low tuition and a plan for pre-payment of postsecondary education expenses. Through these seminars and other communication mechanisms including these regional conferences, the council looks forward to continued participation with the postsecondary education community, the states, the Congress and the executive branch in the development of improvements and new directions in the financing of postsecondary education.

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1. Federal Programs in Postsecondary Education, an Agenda for 1975, Washington: American Council on Education, February 1974. p. 3-4.

2. Comments on the Report of the National Commission on the Financing of Postsecondary Education, Response of the American Council on Education to a Request from Representatives John Brademas and John Dellenback, April 15, 1974. p. 1-2.

3. ACE Statement on Tuition Policy, press release of the American Council on Education, February 17, 1974.

4. Comments on the Report of the National Commission on the Financing of Postsecondary Education. p. 6.

5. Ibid., p. 11.

6. ACE Statement on the Final Report of the National Commission on the Financing of Postsecondary Education, February 8, 1974. p. 5.

THE ASSOCIATION FOR INSTITUTIONAL RESEARCH

The Association for Institutional Research (AIR) was established in 1965 for the purpose of benefiting, assisting and advancing research "leading to improved understanding, planning and operation of institutions of higher education." Currently, AIR has over 1,000 members drawn from a cross section of institutions and agencies, public and private, throughout the United States, Canada and other nations.

Prior to 1965, an informal group of Midwestern institutions had sponsored a series of National Institutional Research Forums that brought together those engaged in institutional research and that encouraged the publication and exchange of theory and practice in the field. AIR continued the practice of holding annual forums and they have become a major activity of the association. The most recent forum, with over 500 registrants, was held in Washington, D.C., in May 1974. The theme of this forum was "Public Policy: Issues and Analyses." Two of the general sessions featured panels on the financing of postsecondary education. In addition, a legislative briefing on Capitol Hill included some discussion of the public policy issues involved in the financing of postsecondary education.

While most of the members of AIR work at the institutional level, the growing role of state boards and commissions and the present and potential roles of regional and federal agencies have expanded the concerns of most of our members beyond purely local and parochial concerns.

The Association for Institutional Research has not taken and would not expect to take an "association position" on financing proposals. The community of interest of AIR members lies not in specific policies _per se_, but rather in the development, improvement and utilization of skills and techniques that further the understanding of the process of "education" and that advance the effective use of both the human and the financial resources available.

Whether institutional, statewide, regional or national in scope, the resolution of policy issues can be aided substantially by providing decision-makers with data relevant to the questions to be answered. With an adequate and valid data base, the appropriate analytical techniques can be utilized to afford the decisionmaker an opportunity to weigh the probable impact of policy options.

The fact that AIR does not, as an association, take a position with respect to the various proposals for financing postsecondary education does not preclude individual members from having opinions about the various proposals. The association includes members from all segments of higher education and the perspectives of individual members reflect this fact.

The Association for Institutional Research is pleased to assist in sponsoring the regional conferences on the financing of postsecondary education.

RICHARD A. FULTON

Executive Director and General Counsel,
Association of Independent Colleges and Schools

Anything that we would say would merely be our personal interpretation of what we have perceived over the years to be the interest and concern of the association. I am not in a position to give you the "association's position."

As we perceive present public policy in the United States, it appears that institutional grants and subsidies are generally limited in education as distinguished from agriculture, defense, communication, transporation, etc. to public and nonprofit institutions. On the other hand, in the area of financial assistance to students, present public policy seems to indicate that it is the need of the student and the quality (rather than the form of institutional governance, i.e., public--tax consuming; private nonprofit--tax avoiding, proprietary tax paying) of the school which governs access to programs of student financial aid.

There is a long history of proprietary, institutional receipt of federal-state funds for educational training under contract. Despite the confusion in the minds of some educators and administrators between under-contract training and grants, there is a valid distinction which has great utility. In such programs dating back to 1921 under Vocational Rehabilitation, or Manpower Developmental Training Act beginning in 1962, the receipt of funds is neither a grant nor a subsidy but rather a consideration received under a contract to provide training for a particular person or group of persons. Unfortunately, there is much misunderstanding of the distinction between under-contract training and open-ended grants and subsidies.

From time to time this association has been invited to testify before Congressional Committees concerning aspects of the several federal programs of education. We have always avoided becoming embroiled in the polarized controversy of student versus institutional aid. Up to the present time, we have limited our comments to under contract training and equality of access to the various programs of student financial aid.

We have noted, with some regret, that there does seem to be a lack of precision in defining the goals and the nature of many of the different programs. Despite the generic category of student financial aid, as we perceive the programs, there are some programs in which the student is merely an incident of the institution's discretion to disburse federal-state subsidized largess; whereas in other programs, the institution is but an incident of the student's decision, as the result of his entitlement. There seems to be a reluctance on the part of some analysts and policy commentators to come to grips with these realities.

In the area of eligibility, it does seem that the majority of the time has been devoted to the defining of the eligibility of the institutions, when much of the concern really should revolve around the eligibility of students. Apparently this practice has its roots in the National Defense Education Act of 1958 which was essentially an institutionally oriented program rather than a student-oriented program. However, in definitions of eligibility, in addition to a special definition which serves to particularly identify the thrust or goal of the program, it would seem appropriate to us that any definition of institutional eligibility should contemplate at least two concurrent, independent judgments of the institution with regard to its stability and in the quality of education offered. Currently we perceive the law to call upon a judgment by the state and generally by an accrediting agency.

Whether or not accreditation should remain as one of the primary elements which is utilized is a polity matter better settled in the political arena rather than by intellectual disputation. Additionally, we feel that there should be authority by the government program disbursing agency to limit, suspend or terminate the eligibility of an otherwise eligible institution for nonperformance within the program or failure to adhere to pre-established standards peculiar to that program. We feel this authority is appropriate because there are certain facts and data peculiarly within the knowledge of only the federal or state program administrator that are not available otherwise.

The above state opinions are only mine, and are in no way to be attributed as to being the "association's position statement relative to the financing of postsecondary education."

NATIONAL ASSOCIATION OF COLLEGE AND UNIVERSITY BUSINESS OFFICERS

The following has been synthesized from the comments of the National Association of College and University Business Officers (NACUBO) on the report by the National Commission on the Financing of Postsecondary Education submitted to the U. S. Commissioner of Education in February.

The commission's report covers many complex and important facets of higher education, but it is unfortunate that time does not permit an indepth evaluation of the entire study. The commission is to be commended for its efforts in gathering certain information which had not previously been accumulated at the national level. That was a formidable task to accomplish in a short period of time!

A careful reading of the report reveals a number of concerns pertaining to terminology, concepts and unnecessary variations from acceptable accounting and financial practices. Imprecise and inconsistent use of terminology throughout the report clouds the meaning of the commission's statements and would make difficult the implementation of recommended concepts.

In many of its tables and summaries the commission departs from generally accepted accounting and reporting practices. NACUBO is not certain whether the commission is merely presenting analytical examples or whether it intends to create a new accounting and reporting framework. If the latter is the case, we caution that the existing accounting and reporting practices have been carefully developed over a long period of time. Further, they are widely understood within higher education and they work well. They should not be lightly discarded in favor of an untried new approach developed hastily over a period of a year and a half. These departures appear to be unnecessary to accomplish the particular analysis intended.

NACUBO shares the interest of the commission in developing better financial data and costing methodology. The commission's report points out that the capability of providing per-student cost information has become "symbolic of good institutional management." Per-student cost may help move higher education toward excellence, but there are many other efforts that could be accomplished at much less expense that could also be effective in moving institutions toward excellence. Direct instructional costs, marginal costs of specific programs, comparable costs of specific activities such as computer centers, measurement of energy costs, library costs and costs of book acquisitions are among a number of cost measurements that could be very useful to management in the resource allocation process.

There is no question of the importance of developing per-student costs. However, it is equally important that the factors that produce the costs be simultaneously displayed. But even within the display of the factors that produce the cost, extreme caution should be exercised in drawing conclusions from a comparison of the costs in the absence of similar information about the comparability of benefits.

When appropriate costing techniques evolve and data is compiled through Higher Education General Information Survey (HEGIS) reporting, such information must be reconciled to the annual financial report and be subject to audit.

Chapter 8 of the commission's report and the associated staff paper entitled A Proposal: Interim National Standard Procedures for Deriving Per-Student Costs in Postsecondary Educational Institutions have been partially derived from the National Center for Higher Education Management Systems (NCHEMS) Cost Analysis Manual and Information Exchange Procedures, which are still in the developmental and testing stages. The interim national standard procedures recommended by the staff paper should not be adopted without additional review, revision and evaluation. It obviously was necessary to hastily assemble this document at the end of the work of the national commission. It would appear that, in the interest of simplification, what has resulted is not a set of procedures but a set of general guidelines to costing, much of which was generally known prior to the existence of the commission and prior to the establishment of NCHEMS.

Furthermore the commission's report notes that the NCHEMS procedures worked reasonably well for four-year liberal arts colleges, somewhat less well for community colleges and not very well at all for major research universities. Relating this to the Carnegie topology and analyzing the enrollment of institutions shows that the procedures will work well, at most, in institutions that enroll less than 40 per cent of the students presently enrolled in higher education.

If these guidelines were adopted without exhaustive review for testing and modification, the result would be comparability in the range of a 50 per cent error--plus or minus-- from the mean. If this range of error is acceptable, it should be recognized and so noted. Institutions should not be encouraged to adopt such a methodology without a more careful consideration, review and statement of procedures.

A comment on the commission report from a business officer at a private college of 2,000 students is as follows:

> I would submit that despite the implications on page 7 under "Applicability," it is only true that the proposed procedures would accurately represent the liberal arts college with traditional classroom experience if you take it in the grossest aggregate for

> the college. Any attempt to submit data by discipline which would be useful is hard to comprehend, particularly when it is an attempt to do it by upper and lower division. A solution is that liberal arts colleges with full-time equivalent student enrollments of less than 2,000 be given an option for national reporting purposes of using "the short form" or the regular procedures as outlined in the interim recommendation.
>
> "The short form" would use only one academic division for the instructional program at the college. Specifically, within the taxonomy of instructional programs developed by Western Interstate Commission for Higher Education (WICHE), it would be 4901 "General Liberal Arts and Sciences."
>
> On the other hand, it is hard to see the utility of per-student costs for various disciplinary departments as the costs can vary by several hundredfold from year to year depending on varying enrollments. The fact is that this latter type of data in these refined aggregates could easily be subject to abuse by a reader who did not pay attention to all the footnotes and caveats. Under the short-form arrangement, of course, the institutions would not have to use the induced course load matrix either.

None of this would preclude the individual institution from using the Information Exchange Program.

Referring to the Staff Report written by James Farmer, a vice-president of one of the multicampus state institutions has commented:

> The jointness of product, costs and of production precludes

meaningful analysis in research universities, even when arbitrary allocations are made, as provided for in the NCHEMS model.

The present paper deviates somewhat from the NCHEMS model in its treatment of capital, but tends to ignore the contribution of the physical plant in the teaching-research-service package of products. This does not solve the problem of proper recognition of the part played by the plant in allowing the flow of services, and, at least as important, the differential role played among institutions.

The basic NCHEMS model and this model do not provide for different goals among institutions which result in different sets of policies among institutions and therefore different optimal productive processes and differential values of outputs measured against institutional goals. The model is not qualified as to its utility, and therefore use of the model to derive "comparable" costs statistics implicitly assumes that "A bachelor's degree is a bachelor's degree is a bachelor's degree," and this is not the case. This aspect of the model arises because the analysts have focused on the building of black boxes rather than on decision making.

Allocation of average costs to the level of instruction is a rather treacherous exercise, especially in the small institution and in the research university in that the rank of the individual faculty member assigned to teaching will vary among the set of institutions (because of varying sets of institutional priorities and their ranking, historical patterns of growth in individual departments, accidental staffing for the semester under consideration and like reasons). A department or an institution with a number of highly paid senior professors involved heavily in research may show these individuals as teaching undergraduate courses with resultant very high cost of instruction or it may choose to show these individuals as researching, probably overestimating the cost of research. It has little alternative because of the relatively high price of the one full-time equivalent represented by the faculty member. But in either event, the resultant numbers are misleading, and even faculty activity analysis really does not solve the problems of jointness.

A strength of the introduction by James Farmer is that it raises the important point that it is marginal cost that is probably of importance to the decisionmaker, while the NCHEMS procedures provide only average cost data, the utility of which is severely circumscribed even if the problems of jointness and proper allocation of overhead and fixed costs were "solved."

NCHEMS wishes to determine the average cost of production in a standard manner in order to calculate comparable data on production. This is possible if and only if the identical production process (production function in the jargon of the economist) and constant returns to scale throughout prevailed in higher education. Unfortunately, neither of these requirements are met in the real world of higher education.

NATIONAL CATHOLIC EDUCATIONAL ASSOCIATION

ASSOCIATION OF JESUIT COLLEGES AND UNIVERSITIES

Background

The need for more and better information about higher education became extremely evident during the development of amendments for the Higher Education Act of 1968 and for other pertinent higher education legislation. Tied to this development were (1) Congressional interest in all of postsecondary education, (2) a stress on students as consumers and (3) the weakening financial conditions of colleges and universities. Without the necessary data (and, perhaps, interest), legislation evolved aimed at increasing student access, continuing (but not improving) student choice, assisting institutions, promoting planning and coordination at state and federal levels and a mandate to collect and analyze data necessary to improve legislative policy and programs. Without this background (and its interpretation), the national commission report makes little sense.

It seems unfortunate that we will never know how beneficial P.L. 92-318 might have been for postsecondary education, that is, whether its policy objectives or its programs could have been successful in meeting the problems of financing. It is perhaps even more unfortunate that only selected programs were funded which only partially met the policy objectives originally set forth by Congress. Such limited implementation not only casts doubts on the effectiveness of the act but, more importantly, may also have radically affected both the nature of the financial problem and the conditions causing it. For example, would it not be accurate to say that the national commission report has surrendered the issue of financial distress: financial distress was a crucial issue in P.L. 92-318, but never successfully dealt with in the implementation of the act. The national commission's conclusion appears to rely more on the fact of nonimplementation as a sign of criticality than the actual purposes of the authorizing legislation itself. (This could be said in a more concrete way: The emphasis on the implementation of student assistance of a particular kind has tended to turn attention away from institutional problems; the fore-shortened efforts of the national commission as evident in its report, alone, highlight the correlative issues of student aid access, to the distress of other problems such as choice, diversity, etc.)

Simply speaking, the national commission report is not so much a reflection of the problems confronted by Congress in enacting P.L. 92-318, but of the conditions consequent upon its nonimplementation. I believe that one has to interpret the national commission report in one of two ways: either its business is very incomplete in that access appears to stand out as its focus or that attention must be focussed only on access. To the extent that it is the latter, the national commission report appears to be a posthumous justification of certain strands of thought implicit in P.L. 92-318 and selectively stressed in its implementation.

Despite the negative attitude, however, the national commission achieved valuable objectives.

First, it provides a signal for the future planning and data collection and analysis that will become henceforth part and parcel of postsecondary education policy. To some extent this is an application of the principle of accountability: What account should be made in the use and expenditure of public funds? Are the funds being used for a public purpose and policy objective? Can data be accumulated to determine needs to which public funds might be addressed, etc.?

Secondly, it offers a guideline to implement analysis and planning: an analytical framework and an analytical model. Undoubtedly some form of both of these conceptual tools will be instrumental in policy formation in the future. In fact, the national commission has probably expressed, explicitly or implicitly, all of the mechanical components necessary for policy making for postsecondary education in the future.

Thirdly, relative to explaining the inner dynamics of financial distress, the commission has explored areas of intramural campus accounting systems, funding mechanisms and financial reporting which can serve as a base not merely for analyzing distress but for proposing institutional financial models for, once tested, future applicability.

Fourthly, the drama of the commission's efforts will stimulate--and have stimulated--vigorous activity within and outside of the educational community, whether in approval of, or consternation at, the commission's report.

In any case, the national commission report and all those associated with it deserve public gratitude for an enormous venture. Their efforts will be a landmark in both the history of educational legislation and in public awareness and knowledge of the complexities of the formation of public policies for postsecondary education.

The following pages raise a series of questions largely on the interrelations among the parts of the analytic framework and "a fortiori," the framework itself. The parts include the objectives, financing policies and the analytical model. It does not seem to this reader that the framework is a coherent whole in terms of its parts and it is suggested that greater efforts be made to examine the methodological consistency of the framework relative to particularly the commission's objectives, the financing policies, the financing plans and the model.

Areas of Investigation

I. Objectives

(1) Should objectives be identified as specific "atoms of interest"?

(a) A case could be made for packages of objectives (e.g., access, opportunity and choice as one objective which makes it possible to introduce the logical correlative of access: institutional cost of education. In addition, diversity, excellence and independence are probably not separable issues even for economic analysis and could be packaged with data sought on types of institutions according to typology such as the Carnegie Commission developed. If different objectives are best obtained by different financing policies, what compromises are possible?

(2) Can "access" as an objective be related to education on the basis of an income criterion? How can it be understood as a "value to be maximized" without identifying its parameters?

(a) What is the correlation to which income is related: no tuition, low tuition or high tuition; these plus "other costs" including room and board, transportation, etc.?

(b) If income is the sole "economic" determinant, what assumptions must be made about the availability (accessibility) of institutions: public colleges subsidized from tax revenues, private colleges subsidized by philanthropy (based on charitable contributions clauses in tax legislation applicable to public and private institutions)?

(c) Does access mean inducing additional enrollments? If so, what data exists to support "income subsidies" as an incentive for increasing enrollments vis-a-vis motivation and ability?

(d) Or, what evidence exists to promote the transferability of an income subsidy to become a pricing subsidy for education, whether the award is given to the student or to the institution? What is the "pricing level" to which an income subsidy relates?

(e) What relation do the objectives and their criteria bear to the two criteria behind the requirements stipulated for the alternative financing configurations. These requirements are stated on pages 259-260 of the report: the alternative financing plans "should represent a range of policy choices extending from (a) plans that would allocate nearly all public support to institutions to (b) plans that would allocate nearly all public support to students. The second requirement was that the plans should represent a range of judgments about who benefits from education--[individuals or society]."

The hang up here is that it is supposed that if individuals benefit most, then families should contribute most to pay for education, whereas if society benefits most then public revenues should finance post-secondary education "including elimination of tuition at public institutions." Now there is nothing to warrant elimination of tuition if society benefits most; other alternatives are possible such as vouchers, etc. Thus, the alternative financing plans or configurations are molded by a prior conception of a subsidy policy mechanism and program for education.

Furthermore, and it is not possible for this person to carry out the necessary investigation, a closer look should be given to these two criteria which control the eight financing plans relative to the eight objectives and their criteria. It appears, at least at first glance, that the income criterion for access may be reduplicated by the "a priori" conception of a no tuition policy in the second criteria requirement for the alternative configurations.

II. Analytic Framework

Can question No. 3 stand after steps 1 and 2 (Objectives and Criteria for Achieving Them)? And before step 4? Question No. 3 is: "What assumptions (quantitative and qualitative) should be made about changes in society and in the institutions themselves that will affect the accomplishment of the objectives?"

The series of steps in the analytical framework assumes that once objectives and measure are set, certain assumptions about changes in society and institutions will be made relative to the next step, 4, of identifying general financing policies to achieve those objectives.

What is the change-assumption (in other reactions of the report, assumptions appear to be called strategies) utilized for achieving access? Diversity? Etc. Eight financing plans are computed to determine their success in meeting the criteria for achieving any one objective. Actually the potential for change either cannot be known until the computations are made or change-assumptions should be interfaced with objectives in such ways that politically or socially inacceptable objectives are rejected.

What appears to have happened is that the criteria for step 8 has redundantly included the objectives in its full-costing-to-student-total-institutional-subsidy range. Thus what appears to be establishing a set of financing policies to achieve selected objectives is really a range of potentially adoptable financing plans (actually an assumption of ratios of shared financial responsibility) covering a range of both funding sources (individuals, society, government and philanthropy) and pricing policies (full-cost or full subsidy).

Then it can be asked which better serves the purpose? It does not mechanically answer the question stipulated by the objective. And at this point, the assumptions on change intervene in a judgmental fashion. At this point, again, the atomistic character of the objectives appear and the solution to a choice will depend probably on an understanding of (a) planned change in "shared financial responsibility" (part of step 8) and of (b) what the federal, state, etc. roles are or ought to be in this process. Nothing in the proposed analytical framework should seek to limit this political decision on roles other than explicating the more efficient ways to expend public funds. The process of deciding whether access, or anything else, is a federal objective is not mathematical, nor is the process of defining the criteria for access.

The basic difficulties with the national commission report stem from a serious misrepresentation of objectives and the resultant development of a model designed to indicate success in achieving them one at a time. On the other hand, a range of objectives (expressed this time as requirements or criteria for alternative financing plans) are applied (and which include a no-tuition policy) as determinants in measuring the functions of the alternative configurations.

More effort should be devoted to clarifying the analytical framework apart from atomic objectives. The inclusion of a range of financing alternatives based on requirements such as those noted earlier [see section I Objectives, (2) (e)] should be carefully examined and purified of specific judgmental criteria. Attempts should be made to relate this to the actual financial conditions of postsecondary education so that policy determinations can be open to a democratic process of choice.

III. Analytical Model

(1) Why is the selected model useful largely as a "demand" model and not a "supply" model? Why is the objective of access alone given serious consideration?

(2) Again, a clearer description is needed of how the objectives given determine the model and how the "requirements" behind the alternative financing plans predetermine the utility of the model vis-a-vis the objectives.

(3) To what extent does the selection of discreet (atomic) objectives distort the character of the analytical model?

(4) What place will the idea of an "analytical model" have in future financing procedures? Serious questions have already been raised by some national commission members in regard to the particular model developed. It seemingly is at best a model oriented towards the access objective and unsuited to assist in dealing with an objective such as institutional diversity. In any case, if the analytical model is an idea or tool whose time has come, great efforts must be applied to produce a satisfactory instrument.

IV. Unit Cost Procedure

The emphasis on the analytical model and upon the standard unit cost procedure tends to minimize the importance of the substantive problem at the root of both. Both concepts were generated as practical means to assist in identifying and measuring financial distress in higher education. Financial distress has not disappeared, as is evident from the policy clashes over low public tuition. Unfortunately, there are some analysts who do not appear to be aware of its proportions.

For example, if this particular period of time (e.g., 1972-73) is interpreted as only a trough in a cycle which will ultimately return to stability, what price must higher education pay, especially private higher education, for survival in proportion to other sectors of the economy and to public colleges and universities?

In addition, while a certain stability may have been achieved--at the expense of quality, faculty salary and maintenance of physical plant--each new crisis, such as the energy crisis (and now inflation), dangerously decreases the possibility of improving private higher education. While unit cost figures may provide Congress with a vague idea of national average of need per student per program, the development of indicators of financial distress will make visible the larger picture where the financial difficulties exist and highlight real needs. Such indicators should reflect the distinct financial problems of each of the several categories of institutions: public-private, research-doctoral, four-year college, etc. It is of little value to anyone to lump the needs of small private (or public) colleges with highly endowed private (or public) universities and expect to produce a common denominator solution.

NATIONAL CENTER FOR HIGHER EDUCATION MANAGEMENT SYSTEMS

(The following position paper was developed by staff members of the National Center for Higher Education Management Systems (NCHEMS), a division of the Western Interstate Commission for Higher Education. The board of directors of NCHEMS has not yet reviewed this paper, and therefore, it does not necessarily reflect the formal position of the board or the views of individual directors.)

There is a continuing need for an informed dialogue on and a critical assessment of the alternative methods of financing postsecondary education. To this end, additional analytical tools and compatible data are vitally needed at the institutional, state and national levels.

Since its inception in 1969, the National Center for Higher Education Management Systems has concentrated on this need to improve the flow and quality of information supporting postsecondary education management, decision making and planning at all levels. At the same time, extensive support has arisen in the postsecondary education community for efforts to facilitate more effective allocation and use of the resources available to higher education. While NCHEMS does not advocate any given policy on postsecondary education financing, it does believe that the following developments should be encouraged to bring about improved policy analyses and policy decisions:

(1) More effort should be made to project and determine the full range of impacts that financing policies have on individual institutions, students and their families and states. The perspective of policy analyses too often has been limited to the "overall effect" or the responses of the "average student," the "average institution" and the "average state."

As an example of the kind of effort required, we cite the work accomplished over the past two years by the National Association of College and University Business Officers, the American Institute of Certified Public Accountants and NCHEMS to improve the quality and comprehensiveness of financial data collected by individual institutions. A particular accomplishment was the development of a source/use format for such data. The goal is to provide a new data framework within which individual and grouped institutions, as well as external agencies, can examine in meaningful detail the implications, limitations and advantages of various funding policies and procedures.

(2) Better understanding is needed of the interrelationships in the responses of students and their families, institutions and states to financing policies. For example, a decision to increase direct student aid as a means of improving access may well constitute an unintended incentive for institutions to raise tuition or for states to reduce institutional support. The National Commission on Financing Postsecondary Education laid basic groundwork by proposing an analytic framework that now needs to be refined and made more comprehensive. In addition, this approach needs to be adapted for use at the state level. For example, NCHEMS is now working with four states to develop a flexible planning model that agencies and institutions can use to examine and compare the financing alternatives being considered in their state.

(3) Those who formulate, analyze and decide postsecondary education financing policies need more timely, more informative data.

These data must not only specify what has happened, but also explain why. And most important, policymakers need data that will permit a reasonably accurate prediction of the results that would follow alternative policy choices. As things stand, only a small fraction of the data now collected is ever utilized in policy debates. The specific needs are:

(a) Improvement in the coordination of national data collection to eliminate costly and confusing redundancy.

(b) Analysis of the relative explanatory value of various data in the context of policy issues, so that key data can be identified.

(c) Improvement in the compatibility of data by implementing standard definitions and procedures.

(d) Establishment of policy-relevant time frames for data availability to assure that realistic tradeoffs are made among quantity, quality and timeliness.

(4) Financing at the institutional, state and federal levels must be tied specifically to objectives and the accomplishment of those objectives. The National Commission on the Financing of Postsecondary Education has developed a point of departure for future work in this area and the postsecondary education community must seize the opportunity to develop compatible information in this area.

(5) Financing policies must be formulated to produce positive incentives for states, institutions and students. Too often, attempts are made to legislate constraints within financing mechanisms (e.g., "maintenance of effort") that have the negative effect of removing certain decision-making options of states and institutions.

A financing plan that gives careful attention to creating positive incentives was developed at NCHEMS by Drs. Kirschling and Postweiler

(A Financing Plan that Depends Upon the Educational Efforts of the States and the Attendance Choice of Students). This financing plan provides for tuition reductions, student grants or general institutional assistance on a differential basis. Each state's portion of the total grant would be determined by its relative effort in support of postsecondary education and relative student enrollments. Perhaps most important, the documentation of this financing plan includes a careful analytic study of the incentives that result. Policy analyses are often deficient in this regard and explicit steps must be taken to improve them.

(6) Institutions and states should receive sufficient financial resources to upgrade their planning and management capabilities. No matter how soundly conceived, any method of financing is inadequate unless it encourages and facilitates wise and informed utilization of the resources it provides.

(7) The educational needs of all citizens must be given careful consideration and this means that objective data on all sectors of postsecondary education must be available for analysis and for debate. All sectors of postsecondary education should be encouraged to assist in developing a common set of compatible information on a regular basis.

To sum up, all parties involved in postsecondary education financing deliberations at the institutional, state and national levels require improved, compatible data and better analytical tools. In addition, improved planning and management tools must be provided so that the postsecondary education community will be able to make wise and efficient use of the resources it secures.

NATIONAL STUDENT LOBBY

"The Need for Grounding the Financing Debate in Terms of Students'/Potential Students' and Society's Purposes First"

In the past 30 years since the end of the Second World War, there have been ever-widening demands placed on postsecondary education by increasing numbers of students and potential students, by state and federal governments, by businesses and local communities and by postsecondary educational institutions themselves. Postsecondary education has become "big business," affecting an increasing number of persons' lives and becoming situated at the core of the national economy. In adjusting to such changes in the role of postsecondary education it becomes important to clarify the purposes (and consequent objectives) of different persons and governmental/institutional interests before going on to the next step of the debate which involves specific mechanisms for financing those purposes/objectives in postsecondary education.

During the past 30 years' rapid expansion of postsecondary education, the dominant purposes of the federal and state governments have been to fill manpower demands for economic development and scientific advancement, research demands for national security and economic development and political demands of persons seeking upward economic and social mobility. Today, the manpower demands of the economy are falling off in the traditional job categories of the collegiate sector (teachers, engineers) and the percentage of persons with "college degrees" has already surpassed the "demand" as measured in the job marketplace. National security and research demands have waned as a percentage. However, demand in terms of students and potential students aspirations has continued to increase. Thus, the question in policymakers' minds: "Why and who should pay for expanding opportunities for postsecondary education?"

The confusion over national objectives (derived from multiple purposes) was examined by the National Commission on the Financing of Postsecondary Education, which outlined eight "national objectives" for policymakers to weigh: (1) student access to enrollment, (2) student choice among institutions, (3) student opportunity for program completion through support services, (4) educational diversity of institutions/programs, (5) institutional excellence, (6) institutional independence, (7) institutional accountability and (8) adequate financial resources.

Although this work of the commission was important in developing the concepts of the "student marketplace" in postsecondary education, its work in clarifying the purposes of postsecondary education has been disappointing. The commission's report states that "these objectives do not deal with ultimate purposes of education--knowledge, self-fulfillment and socialization, for example--but with how postsecondary education should be structured, in the broadest sense, to serve those purposes." (p.53) The commission states that the objectives were discussed at length and that they provide a "fundamental statement of what might be termed the 'national interest' with regard to the financing of postsecondary education."

Unfortunately, the absence of articulation or discussion of the ultimate purposes, while understandable, is not the basis upon which to build a well-grounded framework for the financing of postsecondary education. It is like building on the shifting sands of change an enterprise which should be more solidly built on the needs and purposes of society as a whole, particularly as they are expressed through the continuing needs and purposes of students and potential students.

When a student task force of the national commission asked a cross-section of students about their purposes in postsecondary education, two clear categories of needs and purposes were expressed: "When the students were asked, 'Toward what end do we finance postsecondary education?' they did not respond access, opportunity and diversity. They responded 'self-development and employability.' While greater opportunities to enroll may yield greater self-development, access is not an end, but a means. The students determined purposes to be ends and objectives to be means. (See Review of Student Response, presented to the National Commission on the Financing of Postsecondary Education, compiled by Tim Engen, commissioner, and Dan Crippen, student, November 1973. Work was based on extensive surveys of individual students and review sessions with student groups from cross-section of institutions across the country. Tab E, page 12.)

The review continues (Tab E, page 13-14): "Today, not unlike those significant times in history of postsecondary education--1862 and 1935--the students enrolled or planning to enroll in postsecondary education are seeking a new emphasis. Never have the opportunities to enroll been greater.... But while the students are cognizant of the great opportunities for entry, they are critical of the opportunities that await them upon completion. They may conclude that transmission of values, citizenship and sociability are 'givens' in the entire process of education, but the more idealistic outcomes of postsecondary education--employability and self-development--are often unattainable. This plea for a new emphasis upon education outcomes requires: (1) a re-examination of the employment orientation existent in postsecondary education and a public investment to expand gainful employment and (2) a concerted effort to incorporate nontraditional formal and informal learning opportunities to forward self-development and employability. The solution, unfortunately, is not as simple as the expansion of internship programs. These are emphatic requests that are less a symptom of our economic woes and more a reaction to what the Newman task force calls 'the coming era of equalitarianism.' It is not a question of whether postsecondary education is a social or individual benefit. It is a question of whether there is even a marginal benefit upon completion."

The national commission, although calling its aggregation of student and institutional objectives a "fundamental statement of the national interest," made no statement about the central role postsecondary education is coming to take in the postindustrial economy, and the implications for developing human potential which such an economy necessitates. The student review quotes Daniel Bell on the three dimensions of postindustrial society: (1) shift from goods to services, (2) emergence of large-scale professional and technical class and (3) centrality of theoretical analysis as the source of innovation and policy analysis in society. It is the third dimension which is the most important. (Tab E, page 21) There was no discussion of the need for postsecondary institutions to reflect a cross-section of persons in society in order to develop as a forum for understanding and contributing to innovation and policy analysis, which is a growing function of postsecondary education in the "national interest."

Since the release of the data collected by the national commission, persons have responded in many ways. The first student response was the question, "Why was this a study of the financing of postsecondary educational institutions?" Postsecondary education was called a "$30 billion per year enterprise" because that is the amount taken in and disbursed by institutions, although this ignores the majority of costs for students and society incurred for living and other expenses related to postsecondary education. The report did not focus on the motivational or decision-making patterns of students and potential students based on financial and nonfinancial considerations, although many of the nonfinancial considerations were acknowledged as important. In all, due to these deficiencies the national commission's models are seriously lacking in their ability to be used by policymakers.

In the meantime, there has been a growing recognition of the need to focus on the impact of financing decisions on the decisions of students and others. The recently begun study contracted for by the U. S. Office of Education on the "impact of federal student financial aid programs" on the decisions of students, institutions and states is an excellent step in the direction of beginning to collect data for national decisionmakers.

There has also been a growing recognition that financing decisions must be made in the context of models which incorporate the administrative and political frameworks of financing decisions. Unfortunately, much of the discussion about "tuition increases" which comes out of financing models presumes a "steady state" in the political and economic systems, as well as in the enrollment projections.

From a student viewpoint, which includes potential students and their families, there is a need for personal "planning constants" about postsecondary education. Without a recognition of this decision-making, planning process, the financing studies may look rational "from the top down" among various governmental and institutional interests, but they are not rational--or particularly understandable or helpful--"from the bottom looking up." It is important that persons begin to develop power and responsibility for their participation in postsecondary education as part of the model for human development in post-industrial society.

The following is a "laundry list" of personal planning constants of students developed over the past three years with the purposes of developing (1) "more options" and control over one's life and education, in (2) "less time" and with the least expense to the society as a whole. This list has been developed as a means of implementing the loosely-used financing goal that "no person be denied access to postsecondary education for financial reasons."

(1) The basic planning constant for all persons is no tuition or low tuition public two-year, four-year, graduate and vocational institutions. The federal government should not encourage, nor should state or local governments raise tuition in order to "milk a few dollars" from middle-income families. Rather, tuition should be cut as in Wisconsin where a $300 cut resulted in 26 per cent increase in enrollment.

(2) A true entitlement for federal Basic Educational Opportunity Grants and state scholarship funds should be calculable in dollars (similar to G.I. Bill of $260 or $270 per month) based on need. Over a period of years, need should be calculated based on current yearly income of any person who is no longer taken as a tax deduction by his/her parents.

(3) A person should have the option of working his/her way through school rather than being forced into heavy indebtedness. This means that there must be a massive new "G.I. Bill for Community Service" in which persons can earn G. I. Bill monthly education benefits as well as getting academic credit for working in the community.

(4) A person should have the option of "getting through college" in three years of campus-based experience, with widespread off-campus experience being given credit for the "fourth year." As the "most democratic scholarship of all," this pattern should become the norm for undergraduate liberal arts majors and cut cost of postsecondary education to society.

(5) Loans should be available as a matter of right as a last resort. Financing plans which project heavy indebtedness as the norm should be re-examined based on the social costs of "mentally mortgaging" a high percentage of the society at an early age.

(6) Immediate planning should begin on faculty and administrator pension transferability and public service jobs creation as an integral part of developing institutional flexibility needed under any financing plans. This is particularly important if total costs to society are to be kept down and a work/learn model is to be developed.

STATE HIGHER EDUCATION EXECUTIVE OFFICERS

I am providing a listing of the comments and reactions made by the executive committee of the State Higher Education Executive Officers (SHEEO) with respect to the report of the National Commission on the Financing of Post-secondary Education in the United States.

The comments and reactions offered were not intended to be all-inclusive but rather to reflect major issues and concerns. We will gladly provide expanded or additional statements if that would be helpful.

(1) The national commission report, while it chose no particular plan and made no specific recommendations, nevertheless has considerable potential value.

(2) The report should be followed by a systematic debate, over a pre-determined period of time, in an effort to achieve consensus on what the national policy should be with respect to the financing of post-secondary education. While the debate is occurring, more information can be obtained, more models tested; when it ends, Congress should be prepared to act.

(3) As a starting point for the debate, Congress might--by joint resolution--adopt a set of underlying principles. Those offered by Commissioners Boyer, LaFollette, Rodriquez, Porter and Silva (pages 362-367 of the report) would be most appropriate for this purpose.

(4) The process and structure offered by the report are most commendable. There is concern that the states, acting separately, may not be able to make maximum use of the report in creating the level and type of debate that should ensue. More needs to be done with respect to

massaging the material and developing strategies for future activity.

It is recommended that the U. S. Office of Education (USOE) assume a primary role in facilitating the debate being called for and also:

(a) Further assist states and institutions in improving their data collecting capability.

(b) Encourage, finance and improve present analytical tools for determining educational costs by level and field, with a view towards obtaining agreement on a standard national model.

(c) Assist states in developing suitable forums to facilitate consensus on which postsecondary funding policies are potentially most productive.

A USOE-appointed implementing committee could provide helpful assistance to the commissioner's office with respect to this recommended assignment and could, concurrently, provide a constituency that would enhance the possibility of eventual concurrence and action.

(5) The development of a specific federal policy with respect to the financing of postsecondary education is imperative. This, alone, will permit states to determine how they will manage their total resources and meet their responsibilities in this area.

(6) The creation of a national information center, as proposed, is commendable and reflects views that SHEEO has been expressing for some time.

(7) This association is prepared to provide whatever assistance is possible with respect to any or all of these matters.

SECTION III

This is a technical paper compiled primarily by Systems Research, Inc. of Los Angeles, Calif., a team of analysts and outside consultants. This section provides useful information for educators, analysts and staff personnel in government and postsecondary education who have need for utilization of systematic, computer-based techniques for analysis and assessment support in the decision-making processes.

OVERVIEW

Models have been developed in response to the need for a systematic evaluation of alternative proposals to provide new amounts and delivery systems for the finance of students and institutions of postsecondary education. The finance models represent the interrelationships of student response to changes in price, commuting distance and student aptitude to arrive at a demand for higher education. Assumptions regarding the preferences of institutions for types of students, and other institutional objectives such as financial viability, have led to representations of how institutions decide which students to admit and in what numbers.

The three models presented in this paper are all capable of examining the predicted effect that alternative student aid proposals will have on the change in the number of postsecondary students grouped by income and college sectors. In addition, each model has unique capabilities for examination of financing proposals, such as new college development and the effect that student commuting distance has on new student enrollments; the effect on total student enrollments of institutional subsidies, such as capitation grants; the expected change in student enrollments because of changes in admission policies, financial aid practices and tuition charges.

Data to operate the models are readily available for most financing study purposes and the cost of operating the models to examine financing alternatives is relatively inexpensive, about $10 to $20 for each proposal examined with a financing model.

PART I: INTRODUCTION TO FINANCING MODELS

Proposals to increase the financial support for higher education can have a bearing upon the stability of thousands of institutions, millions of students and the direction of the educational process. Examples of federal support for higher education that have brought about significant changes in the nature of the process include the GI Bill, research funds distributed through such agencies as the National Institute of Health and the National Science Foundation, and most recently, the federal government's student aid programs with concentrated support on Basic Educational Opportunity Grants.

The commitment of hundreds of millions of dollars has led policymakers to look for some means to foresee the eventual effectiveness of financing policies for higher education. Developing a common set of evaluation criteria that can be uniformly applied to the many proposals can add some measure of consistent judgment to the competing idealogies and philosophical debates that are frequently attached to financing proposals. In the end, the final decision rests with the policymakers who must consider many competing interests. Yet, to the extent that policy can be assisted by objective and consistent evaluative criteria, the role of the policymaker is less arbitrary and more enlightened as to the results which can be expected.

For many years social scientists have endeavored to develop systematic devices by which higher education policies can be evaluated. When federal policy was faced with a dramatic increase in postsecondary enrollments, models were employed to project the number of students who could be expected to attend. Models were also used to assist educational planners in projection of space requirements to accommodate demands for more courses, and hence, more classrooms. With recognition that increases in enrollments would require some federal intervention to ensure balanced representation by lower-income students, models were developed to project the amount of funding needed. Such models projected the total number of students to be enrolled in higher education, the number of lower-income students expected, the additional number of lower-income students needed to provide a proportionate representation by lower-income students and the amount of money needed to finance the number of lower-income students that federal policy deemed should be enrolled.

Such models were unsatisfactory in reference to definitions of the amount of money required to change the decision of a lower-income person from not attending to attending. Capable only of projecting the future based upon past experience, the models could only make educated guesses at the factors that led to student decisions regarding higher education alternatives. With the advent of longitudinal studies of student behavior, it became possible to provide information usable in models to predict the future response of students to changes in federal policy. The longitudinal studies shifted the capability of the models' uses from that of projecting needs based upon past performance to actually predicting what responses could be elicited from changes in public policies.

The capacity of models to actually simulate--to predict--student responses was not due to technical improvements in the state of the art of modeling. Rather, the shortcomings of model uses could be attributed to a lack of conceptual understanding about what factors influence student judgment and institutional policies. As more information on the factors that influence the interrelationships among the factors in higher education becomes available, models will be able to make greater use of the technology already in existence to aid policymakers in the evaluation of how to provide support for higher education in an effort to achieve objectives such as improved accessibility, student choice and educational opportunity.

PART II: CONCEPTS

Financing models can be characterized by the objectives which are examined: accessibility, student choice, educational opportunity and institutional viability; the underlying economic, social and psychological concepts which are modeled: student price response, student response to geographical distance of an institution and student aptitude; the policy alternatives capable of examination by the model: grants, loans, tax incentives, capitation grants--headcount subsidies; the outputs of the model: enrollments and institution fund balances; and lastly, models can be classified according to their respective data requirements necessary to make use of the models' capabilities.

In this section, the concepts representing the interrelationships of students, institutions and dollars are explained. An explanation of the concepts employed to simulate the processes of students, institutions and dollars will serve to interpret the mathematical expressions calculated in the models.

With an understanding of how a financing model operates, its advantages and shortcomings, the prospective group of users can be extended from the technician to the group for whom the models were originally intended to serve: persons responsible for the development of financing alternatives and the selection of policies that will serve the objectives of federal, state and local policy.

The concepts used in financing models to represent the interactions of economic, social and psychological processes explain the activities of the three major subjects of higher education finance: the students, the institutions and the interaction of financing policies of governmental agencies.

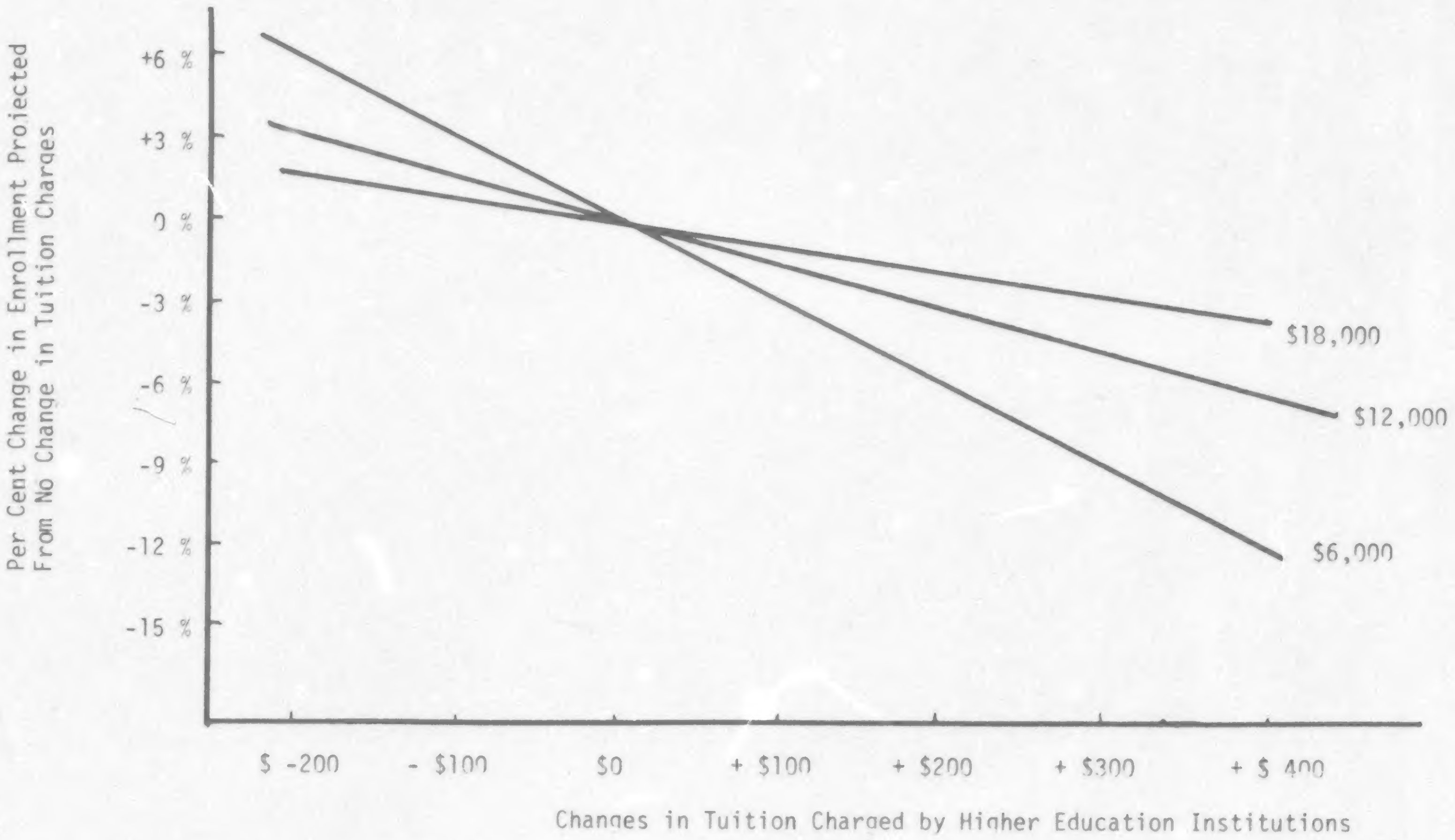
Student processes are explained by preferences in the location of institutions in terms of commuting distance, institutional quality and changes in the price of attendance. The objectives of institutions are represented by preferences for enrollment of students, the aptitude of those students who will attend and the effect on the institution's fund balance as a consequence of enrolling students at the margin--the relative costs and income incurred for the last or next student enrolled. The intergovernmental incentives refer to the impact that a change in federal policies can have on the actions of state and local government toward the support of higher education. This concept would include the expected reaction of the state government--in terms of an increase or decrease in support--as a result of a new federal financing policy to provide subsidies to educational institutions.

Student Price Response

The concept of student response to changes in price defines the expected change in student demand for higher education as a result of an increase or a decrease in the net price faced by the student. The net price faced by a student can change as a result of an increase in the resources made available to students--through student aid programs or an increase in the willingness of parents to support students as a result of tax incentives--or price may change through a direct increase or decrease in the tuition price charged by institutions.

In Figure 1, an example of the consequences of changes in the net price would effect enrollment is shown in terms of percentage change in the projected enrollment of students for three income groups. The lowest-income group is shown to have the greatest change in participation rates when tuitions are adjusted either upward or downward. The highest-income group reveals the least change in enrollment projections when tuitions are changed.

Figure 1. Student Response to Price for Three Income Levels: Percentage Change in Projected Enrollments for Changes in Net Price



In the example in Figure 1, for each $100 increase in tuition over annual increases due to inflation, the model calculates that the projected enrollment of lower-income students will be reduced by about three and one-half per cent. For students from families with incomes from $10,000 to $14,999, a reduction in the rate of projected participation of about one and one-half per cent for each $100 increase in tuition is calculated.

Conversely, for each $100 decrease in the net price faced by students, the projected enrollments of students for each of the income groupings can be expected to increase by the respective response rates.

The concept of student price response can be broken down even further for analytical purposes within the model. For each income group, it is possible to determine the price response applicable to particular types of colleges (public, private, two-year and four-year) and through additional analysis of the data from which these findings were derived, it is possible to determine the price response segmented along such factors as education, student aptitude and institutional quality.

Student Response to the Geographical Distance of a College

Student response to increases in commuting distance can be calculated in a similar manner as student response to changes in price. Commuting distance can influence student decision of whether to attend a postsecondary institution because the time and expense of transportation to a college is a cost incurred to the student just as is tuition.

Only the RAND-Mundel model has considered the relationship of commuting distance on student preferences for enrollment in higher education institutions. In Figure 2, RAND-Mundel have represented the expected preference of a lower-income student with an average aptitude for a community college requiring a commute of various distances. Student response to changes in the distance of the commute are stated in terms of a probability of enrollment for each commuting distance.

In the example, the combination of student income and aptitude make the probability of enrollment a 50-50 proposition when the commute is reduced to zero. The probability of attendance is reduced for each succeeding increment in the commuting distance.

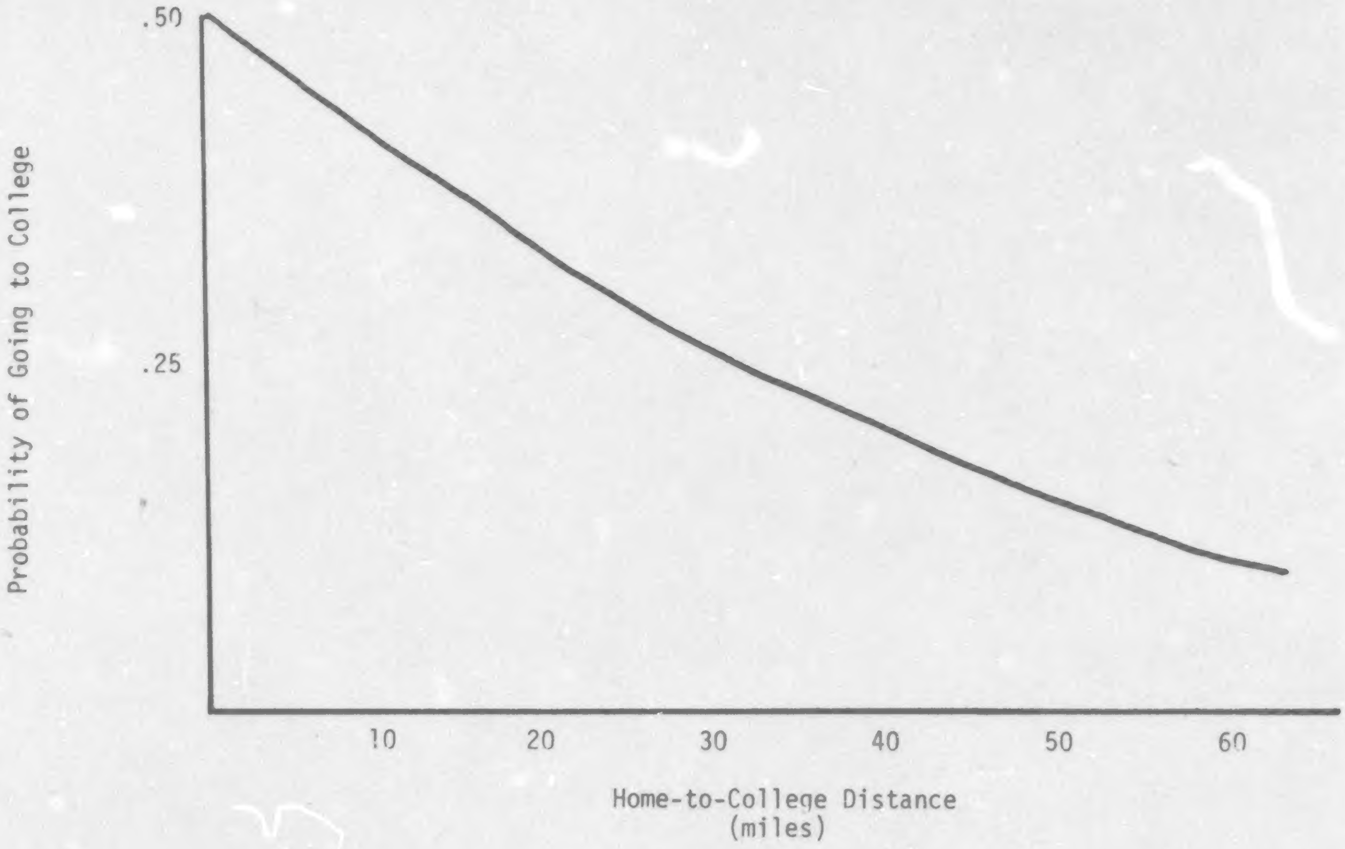
In the RAND-Mundel model, the authors have calculated the influence of commuting distance for three income groups. The effect on the probability of attendance of changes in commuting distance were compared by the authors with the effect on the probability of attendance for changes in the net price. The authors report:

> By comparing the changes in utility resulting from marginal changes in tuition and in home-to-college distance, it is possible to calculate the implicit evaluation, in money terms, of a mile traveled. For the low-income stratum this is about 5¢ a mile, for the middle stratum it is about 11¢ a mile and for the high-income stratum it is about 17¢ a mile.

The perception of a higher cost of commuting for higher incomes is due to the increase in the alternatives available to students with higher incomes. That is, as the distance of the commute increases, the likelihood increases of electing to move away from home and to become a resident student of the institution.

Lower-income students are less likely to be able to afford the alternative of moving away from home; hence, lower-income students do not consider the trade off between commuting and moving to the college location to the same extent that higher-income students do.

Figure 2. Probability of Enrollment vs. Distance for Student Facing "Two-Year Community College"*



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*Meir G. Kohn, Charles F. Manski and David S. Mundel, "An Empirical Investigation of Factors Which Influence College Going Behavior," The RAND Corporation, to be published.

Student Response to Institutional Quality

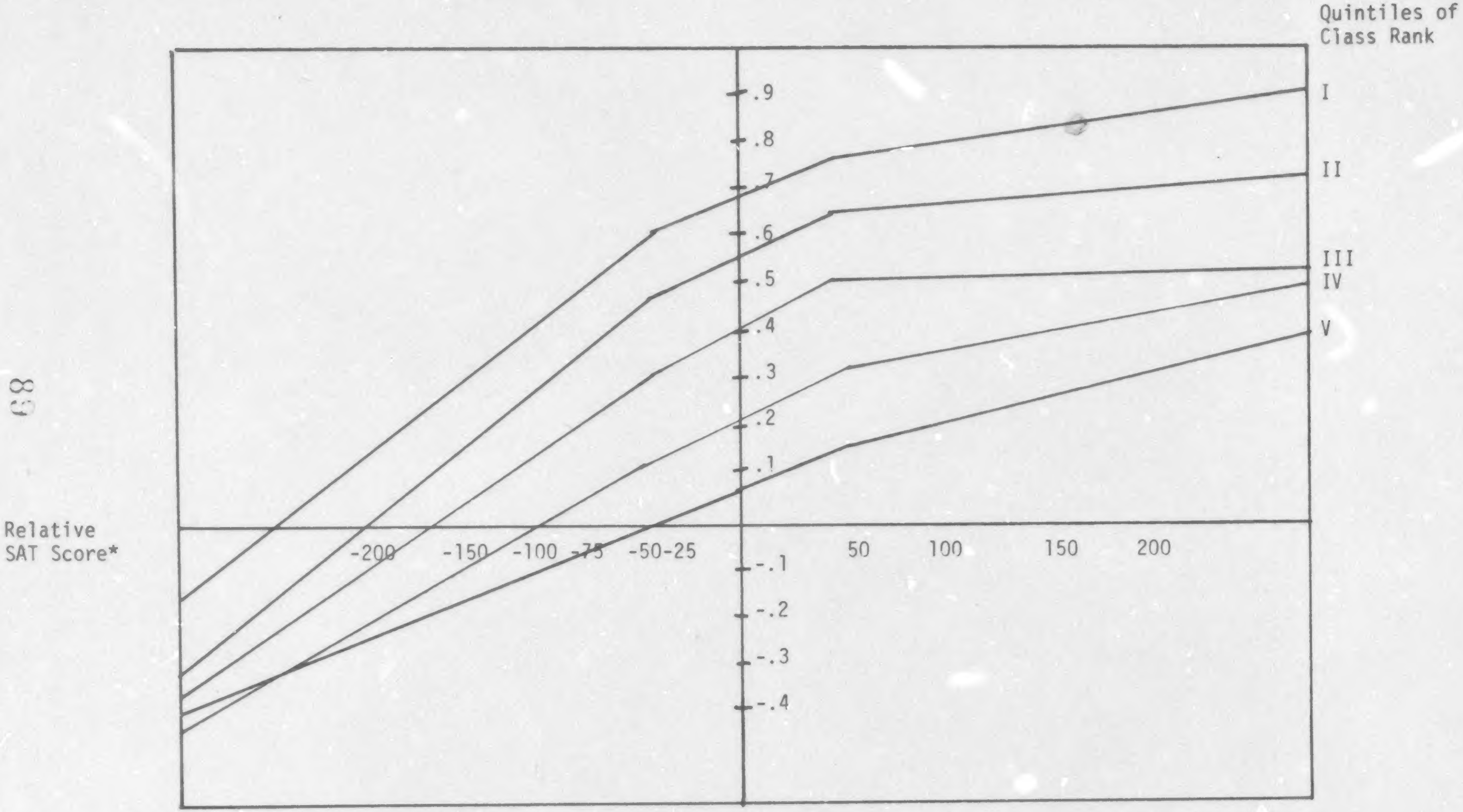
Student choice is also based upon qualitative considerations. One such student concern in the quality of the institution. Institutional quality can be measured in terms of the revenues per student available to the college. Institutional quality is also measured as the average aptitude score of the students in attendance. The model can calculate the behavior of students as a preference for identifying the institution choice with the highest quality or as the institution having average student aptitude closest to that of the student represented in the model.

Institutional Preference for Students

The financing model can consider the likelihood of a student's eligibility for a type of institution based upon the objectives--the preferences--of the institution for students with varying characteristics. An important consideration of institutions in selecting students for enrollment is the aptitude of the student. Institutions seek students with high aptitude because of the prestige attached to such students and diminished necessity for expensive remedial instruction.

In Figure 3, RAND-Mundel illustrate the relationship of a student's class rank from high school and the student's SAT score in relation to the institutional average to determine the importance of past achievement and aptitude to the probability of admission. Student achievement in high school is divided into quintiles. The curves represent the probability of admission as a function of relative student aptitude to college average aptitude for each achievement quintile. The highest quintile of achievement, shown by the curve designated with Roman numeral I, indicates that for a prospective student with an aptitude equal to the average of the institution's

(by class rank in quintiles)



*Student's SAT minus average SAT of the institution.

**Meir G. Kohn, Charles F. Manski and David S. Mundel, "An Empirical Investigation of Factors Which Influence College Going Behavior," The RAND Corporation, to be published.

enrolled students, the probability of admission is about .7 or 70 per cent. For a student with only average achievement in high school, represented by curve III, an aptitude score from 50 to 100 points above the institution average makes the probability of admission just over 50 per cent.

In the RAND-Mundel model, the relatively small increase in the probability of admission for students with aptitudes far above the institution average indicates that achievement in high school bears a stronger influence on the institution admission decision than aptitude score.

Financial Considerations of Institutions

Financing models can be employed to calculate the predicted change in the enrollment of lower-income students when institutions are provided new levels of subsidy. The model can represent the relationship of additional costs incurred by the institution for the enrollment of extra students to alternative subsidy proposals to determine the net effect on the institution's fund balance. The calculation of institutional preferences for enrollment of more or less lower-income students can be predicated upon the net effect on the institution's fund balance. In this regard, it is assumed that institutions seek to remain financially viable; that is, that the institution sets an objective to maintain a certain net operating balance after all expenses have been incurred and funds received for new enrollees. Except for institutions enrolled to capacity, additional students can generally be accommodated with only a very small or no increase in costs. Institutions can be expected to demonstrate a willingness to enroll students until the cost of the last, or "nth," student is equal to the revenue received by this student. Presumably, the institution will even enroll students that cost more than the expected increase in revenues at the margin so long as the institution can still achieve a net cash balance greater than or equal to zero.

The national planning model represents the decision-making process--the preferences--of institutions by four major considerations. These considerations--or calculations--incorporate a preference for a given mix of students by course level, a ratio of students to faculty, a space standard and a mix of faculty. For the nth--or last--student admitted, the institution would calculate the impact that the nth student has on the student mix, the student faculty ratio and the institution's desired space standard. If a change in costs is required (for example, hiring an extra faculty member to maintain the student-faculty ratio and the mix of faculty by rank), then the institution determines the nth student's impact on the fund balance. If the desired fund balance can be achieved with the enrollment of the nth--or last--student, the student will be admitted; if the enrollment of the nth student requires the institution to reduce the fund balance below the desired level, the student would not be admitted.

When a subsidy is provided for existing enrollment levels or added subsidies can be received for increasing enrollments, the institution's calculation of the net effect on the desired cash balance can be represented by the model and a determination of the expected change, if any, in enrollments can be predicted. Institutional subsidies can take the form of capitation or headcount grants, grants based upon the number of graduates of the institution or subsidies that are based upon the number of students enrolled who qualify or receive federal student aid funds.

Relationships Among Funding Sources

The financing model may include assumptions on how the many sources of funds available to the institution react to each other when one increases or decreases its relative share. For example, the model may consider the response of a state to its financial obligation when the federal government elects to provide capitation grants to institutions. Or, the model may explain the response of the state government when a public institution faces an increase in enrollment due to a new federal student aid program. The response of the state government when the institution loses enrollment due to increase in competitive forces from other institutions receiving new higher levels of support can also be represented.

Other interrelationships of funding sources could include the response of states to a federal incentive grant program or the response of private donors when state support for private colleges is introduced. Private support may be influenced in yet another way; changes in state and federal taxing policies, which permit deductions of tuition payments or a repeal of the exemptions of educational donations from taxation, can affect support for institutions. These could also be considered by a financing model as alternative policies facing governmental agencies.

The capability of financing models to consider these possibilities is limited at the present time by the availability of adequate data.

Other Considerations

In addition to the above concepts that represent the interrelationships of student, institutional and governmental processes, the financing model can make assumptions regarding the pool of students that will be affected by institutional and government policies and the manner in which decisions are made to award new funding levels of student financial aid.

Enrollment Pool

The number of students that can be influenced by changes in financial policies is determined in part by the definition of the enrollment pool reached by financial proposals. The pool of potential students is often defined to include only newly graduating high school seniors who will be first time postsecondary students if they choose to attend; it may be enlarged to include an examination of effects on veterans, older persons and those who attend part time as well as full time.

Financing policies are often studied in terms of their results several years into the future. The way in which the model calculates the number of students enrolled in future years is an assumption made by the model. The model may make a projection on future enrollments based upon enrollment rates in past years or on the basic assumptions regarding the size of the enrollment pool--derived from available information on changes in the birth rate, size of the high school graduating class and other sources of potential students.

Financial Need Basis for Student Aid Distribution

The model requires assumptions on how new federal aid dollars will be distributed to the pool of potential enrollees. The need basis normally takes the form of an equation which makes need eligibility a function of income and institution price, but it can be so elaborate as to include a table of specified levels of eligibility for each income level and institutional price. The criteria by which aid is distributed will indicate not only those students eligible for aid under a new level of state or federal spending but the amount of aid. This is important in an attempt to determine the net price faced by the student in electing whether to attend college and which institution to choose.

In Figure 4*, the size of the student aid grant is determined by the family income and the institution's charges. If desired, student aid eligibility

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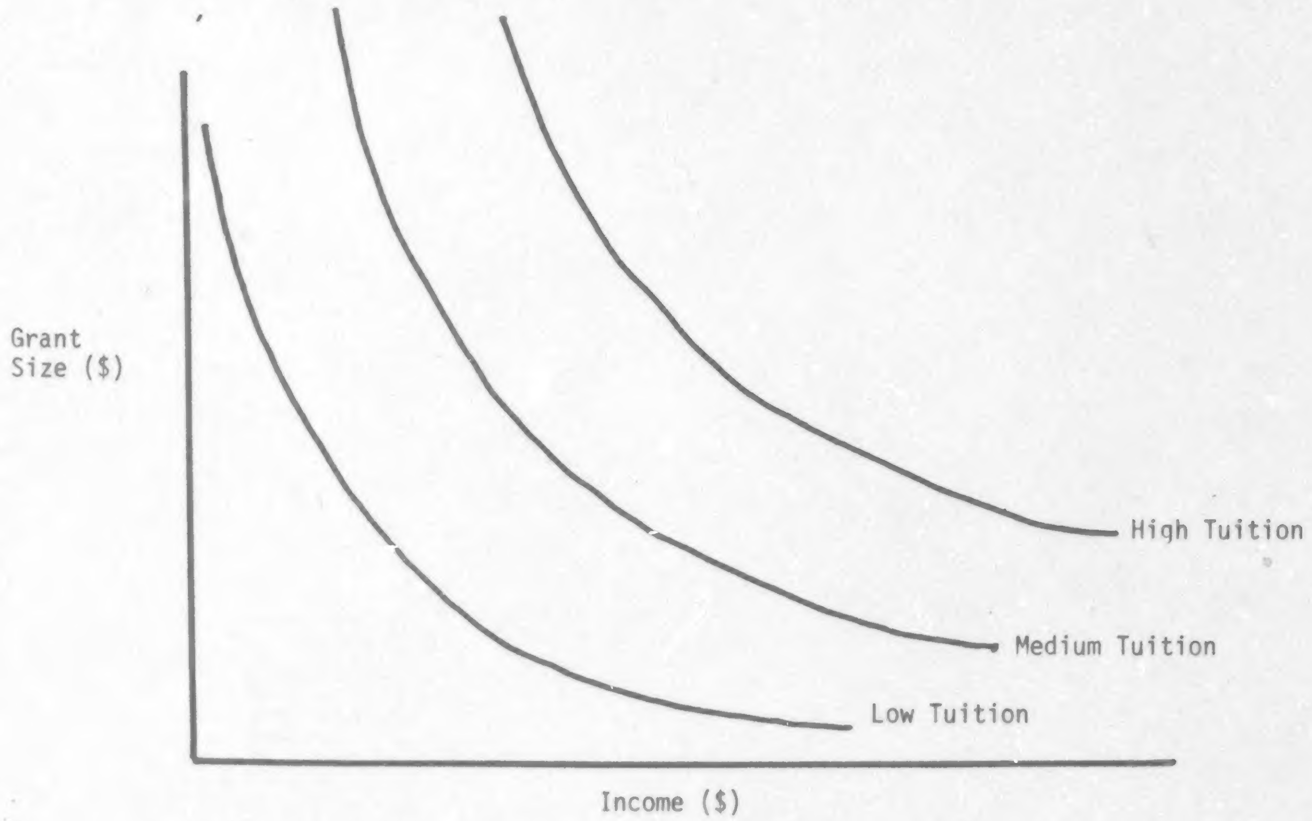
*National Commission on the Financing of Postsecondary Education. "A Framework for Analyzing Postsecondary Financing Policies." Staff report by Daryl E. Carlson, James Farmer and George Weathersby, (Washington, D.C.: May 1974.)

Figure 4. Distribution of Student Aid



The size of the grant is based upon family income and the price of tuition.

could be predicated upon other factors as well--student achievement, for example. The discussion of need distribution concepts in Part IV points out that there are other ways of modeling the distribution of student aid funds. Each model can interpret the same basic assumption--in this instance, student aid distribution based upon need--with the use of different criteria. As is noted in Part IV, RAND-Mundel studied the distribution practices of institutions and could not derive any consistent set of criteria by which institutions allocate assistance.

PART III: DESCRIPTION OF THE FINANCING MODELS

In this section each of the models will be described, including an explanation of which concepts are incorporated and how they are employed.

National Planning Model of the National Center for Higher Education Management Systems (NCHEMS)

The NCHEMS' national planning model was conceived to consider a broad range of policy matters, including the question of access. Measures of institutional viability in the face of possible declining enrollments, institutional quality and accessibility are the starting points for the more comprehensive effort. With the full model, it is expected that federal policymakers will be able to consider the interrelationships and, hence, the trade-offs among alternative federal policies toward higher education.

The logic of the model simultaneously considers the decisions faced by institutions and students. Once the institutions have determined their tuition and enrollment policies based upon their mix of objectives, students are able to calculate the desirability and probability of their own attendance given their range of options. The preferences of students and institutions are then matched to determine enrollments by institutional classification, net fund balances and space availability.

The model describes the objectives of institutions through a series of equations that state the institutions' goals, including desired student-faculty ratio, faculty and student mix, institutional fund sources and expected fund balances.

Demand by students is expressed as a probability of attendance by student group--with given family incomes, aptitude, etc. for each institutional sector; with its given price; and as a representation of institutional quality, the average SAT score of the student body.

At this time, the model is in use by the U.S. Office of Education to examine alternative financing policies. Data for use in the model have been collected from many sources, including representations of student behavior from the Miller-Radner work and institutional information from the Higher Education General Information Survey of the National Center for Educational Statistics.

NCHEMS is currently working in cooperation with four states to develop a second model specifically designed to meet the needs of state level analysis of financing alternatives. The states are Maryland, Colorado, Massachusetts and Michigan. These states were chosen in order to ensure the model's capability to accommodate a wide range of higher education systems, regional differences and student types.

Potential users of the model interested in examining federal level financing policies are not required to collect data for the model as these are already prepared by the authors of the model. Users need only put into the model the alternatives to be considered. The estimated cost of examining a financing alternative, including costs of bringing the model into operation on a computer facility, is about $20.

RAND-Mundel

The RAND-Mundel effort, "An Empirical Investigation of Factors Which Influence College Going Behavior," forecasts student response to college location, tuition and academic competency relative to the institution choices available.

The model's logic is described by the authors as follows: "The student's decision problem is decomposed into three successive stages: For every available college, a decision on whether to commute or to live on campus if that college is finally chosen; choice of the best college available, given the residency decision; a decision on whether to enroll at this best college or not at all. The residency choice is determined by home-to-college distance, family income and other variables. The choice among colleges is affected by ... tuition, room and board charges, average student ability, field breadth and per student revenues; student attributes include family income, ability and home-to-college distance. The enrollment decision is determined by attractiveness of the "best" college alternative, parental education, student sex and family income."*

Concepts used in the model are student response to price and to geographical commuting distance. The model does not consider potential policies that could affect the institution's fund balance, manipulation of the institution's objectives or incumbent costs.

The model calculates a utility received by the student for each characteristic and concept incorporated in the model. The utilities can be negative in the case of the price faced by the student or positive in the case of the student's aptitude and the quality of the institution. The negative and positive utilities are summed to arrive at a net utility for each institution alternative faced by the student. A probability of attending each institution type for a given student takes into consideration the best noncollegiate alternative available to the student. The alternative yielding the highest net utility--the highest probability--determines the institution that the student is most likely to attend.

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*Meir G. Kohn, Charles F. Manski and David S. Mundel, "An Empirical Investigation of Factors Which Influence College Going Behavior," The RAND Corporation, to be published.

RAND-Mundel has incorporated many student characteristics that are not used by the other models. While all three models derive their assumptions on student behavior from the 1967 Illinois SCOPE data, RAND-Mundel made further analysis of that data to derive understandings on the importance of parental education, dormitory capacity, the academic standards of the institution, breadth of offerings and room and board costs.

One finding of the RAND-Mundel study is that students do not perceive changes in room and board costs charged by institutions to be as important as changes in tuition charges. The authors explain that students consider the price of room and board to represent the quality of life afforded resident students. This is considered a positive characteristic to students and, hence, higher costs associated with room and board do not elicit as negative a reaction as high tuition. This holds especially true for the highest-income students, who RAND-Mundel show actually increase their participation at institutions where room and board are increased in price.

The model's authors are currently preparing a modification of the model to examine financing alternatives in the state of Florida. Data collected by the state for the 1971-1972 school year are being analyzed to develop the necessary relationships for student behavior.

The cost of analyzing the data from which the original relationships of student behavior were derived was estimated to be about $400 to $600. Once the coefficients to represent student behavioral processes have been derived, the cost of running the model to examine the enrollment probabilities for a student facing choices among institution quality, cost and distance is about $10.

National Commission on the Financing of Postsecondary Education (NCFPE)

The national commission staff developed a model that permits analysis of alternative financing policies channeled through students. Because the model does not make assumptions regarding institutional objectives or behavior, the national commission model is not equipped to compare policies that call for direct institutional subsidies with policies that use student aid as a means of supporting higher education objectives of state and federal governments. The model studies the effects on enrollment by income grouping and institutional sector in terms of how students respond to changes in price (tuition) and changes in resources (student aid grants).

The model is capable of permitting policy alternatives to be expressed in terms of grants or loan programs aimed at students with specified family incomes and maximum need eligibility. The model uses data on base enrollments from the National Center for Educational Statistics' predictions to 1982.

The model has been used to evaluate many financing schemes, including eight more commonly discussed alternatives described in the national commission's final report. The model provides outcomes in terms of enrollments by income grouping, institutional sector and cost of various programs.

At the present time, the model is in use by at least one state, Illinois, with updated information of student responses to changes in price. Documentation for the model for potential users is included in a publicly available national commission staff report, A Framework for Analyzing Postsecondary Education Financing Policies. The estimated cost of running the model to analyze one policy alternative is in the range of $5-$10.* Potential users can operate the model on their own computer equipment or can take advantage of IBM's Time-Sharing Option (TSO).

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*Daryl E. Carlton, James Farmer and George B. Weathersby, A Framework for Analyzing Postsecondary Education Financing Policies, (Washington, D.C.: U.S. Government Printing Office, May 1974. p. 185).

PART IV: COMPARISON OF THE CONCEPTS USED IN THE MODELS

In Part III it was noted that each model made use of a different combination of the concepts that had been explained previously. In this section, the models will be discussed in terms of how the concepts were interpreted by the models with comparisons to highlight the similarities and distinctions.

Student Price Response

The three financing models derive their assumptions regarding student response to price from the same data source, a longitudinal study of students conducted by SCOPE.* The study traced randomly selected students' activities over a period of years. In this manner, a student could be followed from one year to the next in an attempt to determine any common patterns of activities. Potential difficulties in use of data from 1967 to predict student responses in the mid-1970s have been recognized. Several federal student aid programs have emerged since the time of the original data collection effort and increased attention has been given to preparation and enrollment of lower-income and disadvantaged students. This may have some impact on perceptions not recognized at the time of the longitudinal study. However, these possible deficiencies are not attributable to the capabilities of the modeling technique but to the collection of the necessary information and the organization of information on students into a usable format.

The national commission's financing framework calculates student response to price for three student income levels. For each of the three income levels, the price response is differentiated for seven classifications of institutions and each income level's price response is further weighted to reflect the distribution of student aptitude.

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*School to College: Opportunities for Postsecondary Education, the Center for Research and Development in Higher Education, University of California, Berkeley.

NCHEMS

The national planning model of NCHEMS computes the probability of student attendance based upon institutional price, as does the NCFPE framework. In addition, the national planning model recognizes differences in student ability as measured by SAT score and differences in institutional average SAT for enrolled students.

RAND-Mundel

The RAND-Mundel model makes separate calculations of student response for price changes and other environmental influences such as institutional quality, student ability, geographical distance, parental education, diversity of program offerings, average instructional costs and percentage of resident students. The model calculates a unique weight for each of these factors rather than combining them into a single price response coefficient. The sum of the weights attached to the factors is a measure of the utility gained by the college choice for each student. The level of utility thus calculated from the sum of the considerations yields a probability of college attendance and the characteristics of the college type most likely chosen.

While all three of the models acknowledge the direct response of students to changes in price, the national commission makes one further calculation: an estimation of the relative changes in the attractiveness of other institutional types when one type changes its price. The model thus recognizes the interrelationship of the choices faced by the students.

When the price of a two-year public institution increases, not only does this choice become less desirable, but the relative attractiveness of other alternatives can increase. This cross-effect, called the cross-elasticity of demand, is calculated in the national commission model.

Institutional Fund Balance

The models deal with the use of institutional fund balance in different manners.

The national commission model assumes that increases in institutional costs generated by growing enrollments will be met by increases in the relative contributions of private, state and federal funding sources. Decreasing enrollments are assumed to lead to average unit cost decreases in total budget needs. In this way, the commission model tends to overestimate institutional needs with enrollment increases and to overestimate the institution's capability to decrease costs when enrollments decline.

The national planning model of NCHEMS computes a net cash balance based on the costs incurred by the institutions from their activities and revenues from private student, state and federal sources. The net cash balance is calculated separately for each institutional sector, given the specific assumptions about institutional objectives and sources of funds when enrollments change.

In a study of factors that contribute to institutional cost increases, it was found that federal aid does have an overall effect upon institutional decisions to change tuition price. The Cost of College II, prepared under contract by Columbia Associates for the U.S. Office of Education, estimates that federal funds limited price increases to $67 for each $100 considered necessary by the institution.

Distribution of Federal and State Student Aid Funds

Each model makes different assumptions regarding how institutions and funding agencies distribute student aid funds. RAND-Mundel studied the distribution practices of institutions to determine the factors that lead to a decision to provide assistance to a student. Based upon its findings, RAND-Mundel suggest that it is not possible to draw operable generalizations from the practices of institutions distributing student aid funds. The authors argue that "Among the possible causes of this result are: (1) general data inadequacies, (2) lack of a good specification of the aid distribution process and (3) the possibility that colleges may have acted capriciously."

The national commission model made a straightforward assumption of student eligibility for student aid programs based upon the cost of the institution's tuition, the student's family income and any restrictions placed by the granting agency on maximum income eligibility. This calculation does not exactly represent the actual process of need determination performed by institutions or the national agencies, American College Testing Service and the College Scholarship Service of the College Entrance Examination Board, but it does provide an approximation useful for determining the distribution by income group of expected recipients of aid programs.

The national planning model prototype assumes that all potential new students are also eligible for new student financial aid. This is recognized as a shortcoming by the model's authors. They state: "The current version of the prototype applies student aid to all potential students and the modification would obviously move the model closer toward current student aid policy." The effect of applying new student aid funds to all new students is to underestimate the amount received by lower-income students and to overestimate the eligibility of middle- and upper-income students. The

The consequence is that the model overestimates the price faced by lower-income students and thus underestimates the impact that aid programs have on lower-income students facing college decisions.

Enrollment Assumptions

The national commission model takes enrollment projections from the National Center for Educational Statistics as the base for each of the planning years from 1972 to 1982. Changes from current tuition levels and student aid policies are calculated to affect the baseline enrollments. For example, NCFPE projected that the enrollment of lower-income students in 1980 would go up by some 6 per cent if a federal student aid program was implemented with an average grant to lower-income students equal to $200 in excess of tuition increases. An example is given in Part III.

The national planning model does not use baseline enrollments to calculate the effects of financing policies over time. Rather, continuing students are projected as a percentage of each prior year's enrollments. These calculations are performed as part of the institution's decision-making process.

Recall that in the national planning model, the institution undertakes a series of decisions regarding student faculty ratios, student mix and space requirements to determine the number of new students that can be accepted or must be accepted to maintain the financial balance of the institution. One of these calculations is a determination of the number of graduating students and the number lost through attrition. The remainder are assumed to be continuing students. The planning model then calculates the number of new students entering each institutional sector based upon a series of considerations that include the student's family income, student aptitude, institution costs and the average ability of students in each institutional sector. A joint probability is derived and incorporates the considerations from above to determine the distribution of student enrollments among the institutional sectors.

The RAND-Mundel model makes no assumption regarding baseline enrollments. Enrollments are determined by the probability of enrollment for a group of potential students with given characteristics multiplied by the number of potential students in the group. The user must specify the number of students for each grouping (e.g., students with given income ranges, parental education, distance from home to college, income, etc.) for the model to predict enrollments based upon the probabilities attached to each of the student characteristics.

Summary

Each of the models is geared to study different aspects of the very complex questions related to the financing of postsecondary education. The RAND-Mundel model is equipped to examine the effect of distance on student choice; this is most helpful to state planners determining where to situate new institutions. The national planning model prototype attempts to represent the decision making concerns of institutions and aids in uncovering responses that can be expected when additional revenues are made available. This is important to federal planners in evaluating effective ways of channeling federal funds to achieve implementation of federal policies.

The national commission financing analysis framework aids in the analysis of the impact that state and federal support programs can have on student enrollments.

The national planning model permits the user to consider policy alternatives other than expanding enrollments. To the extent that impact on institutional viability and quality can be represented by changes in the net fund balance and the student-faculty mix, the national planning model aids the user in understanding these considerations. Neither of the other models considers aspects of changes in institutional quality or fund balance.

By virtue of the national commission's computation of need analysis and the capability of the planner to place restrictions on eligibility for the federal or state student aid funds, this model has advantages when examining student aid alternatives.

A summary of the concepts and assumptions of the three models is presented in Figure 5.

Figure 5.

	National Planning Model (National Center for Higher Education Management Systems)	An Empirical Investigation of Factors Which Influence College Going Behavior (RAND-Mundel)	National Commission on the Financing of Postsecondary Education
Student Price Response	Yes, based upon Miller-Radner. Probability of attendance that is based upon net institutional cost, family income, student aptitude, average verbal ability of institutional sector. (p. 59-60)	Yes, based upon same data as Miller-Radner but with authors' own analysis. Model develops utility level of which price constitutes a portion of utilization.	Yes, based upon Miller-Radner. Price response for three income groupings that incorporate ability mix of the groupings. Price response coefficients sensitive to institutional sectors. Includes cross-responses, affect of cost change in one sector on relative attractiveness of other sectors.
Geography	Does not consider student response to geographical dispersion. (p. 59)	Yes, based upon authors' analysis of SCOPE data.	No
Inscitution Objectives	Yes, quality represented by student-faculty ratio, faculty mix, physical space, student mix by level, cash balance.	No	No
Institution Financial Viability	Yes, new funds will affect the institution's ability to meet objectives, including fund balance.	No	Changes in institution requirements equal to enrollment change (up(+) down(-)) times average unit cost. Change in revenues equals prior year level minus sum of new enrollment times change in tuition.

Figure 5 (cont.)

	National Planning Model (National Center for Higher Education Management Systems)	An Empirical Investigation of Factors Which Influence College Going Behavior (RAND-Mundel)	National Commission on the Financing of Postsecondary Education
Relationship of State to Federal Funds	No	No	Changes in institutional requirements met by state and federal government in proportion to their respective shares.
Computation of Student Aid	All students considered equally eligible for student aid.	No	Yes, eligibility and distribution of proposed student aid based upon family income and tuition charges.
Institutional Sectors	Public Universities Four-year Two-year Private Universities Four-year Two-year	Average student ability Room and board College revenue per student Breadth of offering Dorm capacity Recognition of coefficients for private university, private four-year, private two-year, public university, public four-year, public two-year	Public Two-year Four-year, lower division Four-year, upper division Four-year, graduate Private Two-year Four-year, lower division Four-year, upper division Four-year, graduate
Student Characteristics	Student aptitude by verbal SAT. Parental income.	Student aptitude by SAT Parental income Parental education Student aptitude relative to institution's average aptitude	Parental income

Figure 5 (cont.)

	National Planning Model (National Center for Higher Education Management Systems)	An Empirical Investigation of Factors Which Influence College Going Behavior (RAND-Mundel)	National Commission on the Financing of Postsecondary Education
Funding Mechanisms	Student-based or institution-based (capitation) differentiated by income, student level, student ability.	Student-based mechanisms only	Student-based mechanisms only

PART V: USE OF THE FINANCING MODELS

Examples of the potential use of the financing models are presented in this section. The examples given are by no means intended to present an exhaustive list of the possibilities. Rather, these examples illustrate the data requirements and the outputs that the user can expect for a particular type of use.

While all three of the models are capable of examining alternative financing policies of the federal government, each model has unique capabilities that make it especially helpful for other kinds of analysis. Examination of the response of higher education institutions to changes in student aid programs or institutional subsidies can be undertaken with use of the national planning model of NCHEMS. The RAND-Mundel model is uniquely capable of explaining the relationship of a new college location and the resulting commuting distance to the probability of increasing the rate of participation by lower-income students. The RAND-Mundel model is also capable of assisting institutions to predict expected changes in the response of the single college's enrollment pool when the college makes a policy change in the priority of distribution of student aid funds or changes eligibility requirements for admission.

The capability to predict in advance of actual commitments of funds or structural changes in institutional policies can facilitate the development of the alternative that will best meet the objectives of the policymakers.

What would happen if state support for higher education over last year's amount were delivered through students instead of through the institutions?

Model Choice: National Commission (The RAND-Mundel and National Planning models may also be used with different information requirements.)

Information Requirements:

Student enrollments by institution sector and income

Baseline enrollments

Resulting increases in institution charges

Calculations of the Model:

For each income group, calculate the response to a higher tuition rate at the public institutions and it will calculate the potential shift in enrollments among the public sectors and across to the private colleges.

Calculate the amount of eligibility for new student aid by income group.

Calculate the enrollment of students by sector by income group.

Results and Findings:

Determine the impact on total enrollments by institutional sector, including the impact on private sector of changes in the relative costs of the public institutions.

Determine the impact of enrollment of students by income group.

Determine the distribution of enrollments of students by income. group among the institutional sectors.

PART VI: USES OF THE MODELS

What are the consequences of building a new community college?

Model Choice: RAND-Mundel

Information Requirements:

How large is the potential enrollment pool?

What colleges are already within a given (e.g., 200 miles) distance of the proposed site?

What will be charges, scope of offerings and level of support given the instructional program?

Calculations of the Model:

Calculate the attractiveness to potential students of the proposed college according to the proximity of the location.

Calculate the attractiveness of the proposed site relative to already existing colleges.

Calculate the total number of students from the enrollment pool who would attend with the proposed college in addition to existing colleges.

Results and Findings of the Calculations:

Determine how the new college will affect attendance at existing colleges.

Determine the number of additional students that would attend college as a result of the additional college.

PART VII: USES OF THE MODELS

How would private institutions use state subsidies?

Model Choce: National Planning Model

Information Requirements:

Institutional objectives: data on ratios of faculty to students, costs and enrollments

Calculations of the Model:

Calculate the uses of the added funds to the existing revenue sources.

Calculate the necessary tuition rate for the expected number of students.

Calculate actual student response, by income level, to the change in price.

Calculate the institutional sector fund balance with additional fund source.

Results and Findings:

Determine the impact on financial viability of the independent sector as a result of public subsidies.

Determine the change in enrollments as a result of public subsidies.

SUMMARY

Attempts to model financial aid and enrollments have a long history. Early attempts projected the unmet need of students attending institutions without adequate funding; models were expanded to project the amount that would be required to meet the needs of eligible students that were not attending. More recent models have incorporated recent socio-psychological-economic longitudinal studies of students and consider the response of students to changing economic, academic and environmental conditions. By monitoring the behavior of students over time, longitudinal studies can reveal predicted patterns of responses to isolated changes in finance-related circumstances. The models have stimulated student response by including such results of longitudinal research as price response, decisions with geographical alternatives and response to academic quality. They have also delineated unique responses of many sub-groups of students according to sex, ethnicity, income, parental education, academic ability and achievement.

While student response has been modeled according to empirical findings, the response of institutions to changing economic and environmental conditions remains a speculative venture. One study has estimated the response of institutions to federal support, but these findings have not found their way into the modeling efforts of planning models. Only one planning model, that of NCHEMS, has attempted to presume the important features that determine the response of institutions to planning alternatives. Even this model admits to intuitive judgments about the nature of the goals of institutions and the relative weights attached to policy variables.

All of the models are limited to projecting the enrollment of students based upon changes in financing patterns. None considers changes in academic quality resulting from deficits or newly found sources of institutional funds.

The student response coefficients of the equations for the enrollments solicited by new, different financing schemes are based upon longitudinal studies that followed students in a higher education climate far removed from current student perspectives and sophistication. The extent of familiarity with aid programs was not included in the SCOPE survey data. Special programs for lower-income and disadvantaged students were unheard of at the time of SCOPE, yet now nearly every college campus in the nation makes provision for these students with special program offerings.

The Basic Educational Opportunity Grants program will offer support for up to one million students this fall through a delivery system unknown in the 1960's, or even the early 1970's. State student aid programs have emerged, since the beginning of the seventies, to the point that state programs rival federal aid in many states.

None of the models is capable of combining all of the features contained separately in the NCHEMS, NCFPE or RAND efforts. Of features held in common, the models do not agree on the weights that should be attached to student decision making.

For example, the RAND-Mundel model calculated a change in the rate of enrollment of lower-income students equal to eight per cent for each $100 change in the net price; the similar calculation using the national commission financing framework yields a change in the enrollment rate of lower-income students of less than four per cent for the same $100 change in the net price. Some of the difference in the predicted response of lower-income students may be attributable to the differences in the two models in representing other student behavioral processes. The RAND-Mundel model calculates the influence of parental education, the student's commuting distance on the probability of enrollment, the student's aptitude and the student's aptitude relative to the average aptitude of students at the institution under evaluation. The national commission model does not similarly delineate these influences; hence, the influence of such factors as parental education and aptitude are unavoidably incorporated in the calculation of student response to price.

While the NCFPE model purports to offer a means for policymakers to evaluate alternative financing schemes, the model's designers concede that it does not incorporate features to compare student aid programs with institutional aid programs. The NCHEMS model does consider the behavior of institutions by making assumptions of collegiate goals. However, these are not as yet based on actual empirical findings.

The RAND-Mundel model raises an important question in the perception of students regarding increases in living costs which yield different student responses than increases in tuition costs. NCHEMS raises an important question as to the objectives of institutions and the extent to which institutions achieve federal access objectives through institutional subsidies. The national commission raises questions regarding the way in which subsidies should be distributed to maximize enrollment increases.

Development of a model that combines capabilities of all three would be a considerable undertaking but would clearly enhance the quality of tools available to the user. The RAND-Mundel analysis of the importance of parental education, commuting distance, student ability, institution quality; NCHEMS' modeling of institution decision making and priorities for spending new funds; and the national commission's capability of manipulation of aid program eligibility and computation of needs analysis are significant analytical tools for use in developing financing policies.

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SECTION IV

With this brief but illustrative set of sample questions, decisionmakers and educators have some indication of the possible questions and concerns encountered when considering postsecondary financing plans. These questions were developed by George B. Weathersby, associate professor at Harvard University.

POLICY QUESTIONS ABOUT FINANCING POSTSECONDARY EDUCATION

(1) What are the objectives to be achieved through programs financing postsecondary education? How would you know if those objectives were accomplished? What measures would you use? How much of a measure is enough? What means other than financing are available? Are alternative means being considered? How will you choose the most appropriate means to accomplish your objectives? How widespread is the agreement on objectives? On measures? How do you plan to develop consensus on objectives?

(2) Where is your (state's) postsecondary educational system now? How much is being spent from all sources, and in what ways? How well are your objectives currently being accomplished? Why do you seek a new policy? What forces will most resist change? What are the real constraints (political, economic, demographic, etc.) on your decision? Have you tested them to know they are real and binding?

(3) How effective are your policy instruments? Do you know what really happens when you change financing (or other) policies? Who changes their decisions in response to different finance policies? Students? Administrators? State legislators? Others? How would you estimate the net effect of implementing a new policy before you decide to implement the policy? After you implement the policy? What are the alternative policy decisions and their consequences?

(4) In your situation, what strategy should you use to analyze your system of postsecondary education? Who should be responsible for planning and for an overview of postsecondary education? How would you use research findings and the results of other national or state

studies in your own situation? How would you separate questions of fact from questions of judgment? What process is likely to provide illumination rather than heat?

PROGRESS REPORT ON THE NATIONAL DEBATES ABOUT FINANCING POSTSECONDARY EDUCATION: TEN BASIC ISSUES

A Paper Prepared for Panel Discussion
at the
Women's Caucus in Political Science
American Political Science Association
Chicago, Illinois
August 30, 1974

by

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Note: This paper by Dr. Van Alstyne is reprinted with permission, as background material for workshop sessions being conducted in connection with the Conference Series, Financing Postsecondary Education: Policy Development and Decision Making, being coordinated by the Education Commission of the States, in cooperation with other associations, agencies and private foundations.

R.F.C.

PROGRESS REPORT ON THE NATIONAL DEBATES ABOUT FINANCING POSTSECONDARY EDUCATION: TEN BASIC ISSUES

1. Access
2. Delivery Mechanisms
3. Equity
4. Strength of the Private Sector
5. Affirmative Action
6. Inflation
7. Federal-State Relations
8. Size of the Education Sector
9. Education Among National Priorities
10. Usefulness of Policy Analysis

Historic debate over the fundamental issue of how we pay for higher education in this country was launched last year with the publication of two reports. The first, Higher Education: Who Pays? Who Benefits? Who Should Pay?, was released by the Carnegie Commission on Higher Education in June 1973 and was followed by a supplemental statement specifically on Tuition in April 1974. The second, The Management and Financing of Colleges, was published by the Committee for Economic Development in October 1973.[1]

Both reports are based on the results of major empirical studies. Each advances a number of recommendations on the organization and financing of higher education. The proposal--common to both reports --which has provoked the greatest response--both positive and negative--recommends that the annual rates of increase of tuition at public colleges and universities be accelerated, thus shifting a larger share of the financial burden to students and their families. Depending on what expenditures are included in the educational accounts, it is estimated that, on the average, tuition currently covers from about one-sixth to one fourth of educational cost. The Carnegie Commission recommends that the tuition share be increased to one-third of the educational cost at the upper division levels over a ten-year period, while the CED proposes that the tuition share be increased to one-half, over a five-year period for four-year colleges and over a ten-year period for two-year colleges. Linked with the proposal is the further recommendation that, aid to low-income students be increased to help them overcome the financial barriers they face in furthering their education.

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[1] For complete citations, see the list of references at the end of this paper.

Three independent arguments are used to justify the proposed tuition increase:

1. Increased tuition is seen as a necessity, because increased revenues from other sources will not be forthcoming;
2. Increased tuition, combined with need-based student aid, will result in a more equitable distribution of public resources;
3. And, in addition, raising tuitions at public colleges will help private colleges by narrowing the tuition gap, thereby reducing market competition from public colleges.

Although the proposed tuition increases are proffered as modest and incremental in the sense that Lindblom and Dahl explicate that term, quantitative change at some point becomes qualitative change. The proposals, if implemented, would represent a break with the historical tradition of low-cost public education which has evolved over time in this country and which resulted in universal access to elementary school in the 1920s and 1930s, and to secondary school in more recent decades.

The CCHE and CED recommendations regarding tuition and student aid triggered debates in educational circles, in congressional committees, in state legislatures, and in the media. This paper attempts to synthesize the major issues in the debate and to assess what we have learned from the discussion so far.

Access

A starting point in any discussion of financing higher education is the issue of access: Who can go to college? In the last twenty years, the overall college-going rate has increased enormously, almost doubling. But in assessing national progress toward the goal of increased access, we need to keep in mind two facts:

1. In spite of almost a decade of need-based student aid programs, income level still has a profound effect on college attendance. The education participation rate of students from families with incomes over $15,000 of 53.0 percent, is over three times the rate for students from families with incomes under $3,000 of 14.6 percent. Actually, the brutal effects of low income, and all that goes with it, on educational opportunity are felt even earlier: The high school graduate rate of students from high-income families is ten times as great as that for students from low-income families, as shown in the detailed table on educational participation rates.

2. Education participation rates have not been increasing steadily over time. They peaked in 1969, and since then they have gone down for every income level, most markedly for middle-income families. The reasons usually offered to explain this decline include (a) the end of the draft, and consequently of the need for young men to use higher education as a means of deferment; (b) a revaluation of the worth of a college education on the part of young people; and (c) dimming employment prospects for college graduates.

I would argue that too little attention has been paid to sharp increases in cost as an explanation for the decline. In the five years since the peak attendance rate, the educational costs for a typical student attending a public four-year college has increased 56 percent, as compared with a 40 percent increase during the preceding five years. But according to Bureau of the Census figures, median family incomes increased 21 percent between 1964 and 1969 and only 15 percent between 1969 and 1973. (Median income figures were $8,579 in 1964, $10,423 in 1969, and $12,050 in 1974.) In short, it takes a considerably greater part of a family's income to send a child to college today than it did ten years ago.

You may recently have read editorials in the newspapers or seen television programs describing the plight of the middle-income student: It is pointed out that, while low-income students receive financial assistance and while upper-income students can still rely on their parents for financial help, middle-income students are not getting aid from either source and thus are being squeezed out of higher education. However, as Miles Fisher, Executive Director of the National Association for Equal Opportunity in Education remarked recently,[1] we characteristically use the term access in two different ways, depending on whether we apply it to low-income or to middle-income students. Middle-income students do have access to low-cost institutions but generally not to high-cost institutions; we interpret this to mean that they are being "denied access." In contrast, though low-income students who receive financial aid are in the same situation (i.e., they have access to low-cost institutions but not to high-cost ones), we do not regard this as denial of access. We have made a hidden value judgment that access to low-cost institutions is sufficient "access" for low-income students but not for middle-income students, who have a "right" (so we judge) to the "best"--i.e., most expensive--education.

Access, in the sense of a chance to go to college, may no longer be an adequate measure of opportunity. In recent discussions, people from low-income and minority backgrounds have pressed hard to extend the concept of equality of educational opportunity from mere access to any institution to choice of an institution and now to capacity for achievement, with opportunity unrestricted by lack of money.

Sharp differences persist in the debate over the most effective mechanism by which to increase access to higher education.

Delivery Mechanisms

The financing debate has become polarized on the issue of delivery mechanisms, with proponents of direct aid to students opposing proponents of aid to institutions or to students through institutionally based student aid programs. But despite the vehemence on both sides, when structured in those terms, the issue is grossly oversimplified, if not downright false.

Some have argued that assistance should be awarded to the students so that, through their market choices as consumers, they can induce greater responsiveness to their needs on the part of educational institutions. Responsiveness can be fairly treated as a separate issue, however. For the moment, let us just track the flow of funds.

As a step toward quantifying the amounts of assistance to institutions and to students, the Policy Analysis Service at ACE attempted to identify the sources and use of funds for higher education. It became apparent immediately that, in reality, the flows are cycles: Aid to students is used, in part, for tuition, which is a source of funds for institutions; aid to institutions is used, in part, to offset tuitions, which helps students pay for education. The cycle is depicted in greater detail in the accompanying chart.

To the extent that the semantic labels student aid and institutional aid are arbitrary--not clearly attached to specific sources and uses of funds--they make much more difficult identification of the actual flows of support for education and thus they confuse the real issues. But so far we have been willing to use these terms in debate over financing higher education. In notable contrast, such fruitless debate over labels has been avoided entirely in the domain, for instance, of housing assistance--we call it housing assistance; we do not call it renter assistance, or buyer assistance, or builder assistance. If we persisted honestly in labeling government assistance according to the primary beneficiaries we might even have to label some of it banker assistance. If bankers resist calling special interest allowances on student loans banker assistance --prefering to characterize the allowances as inducements necessary to draw resources into the student loan market funds which would otherwise command higher rates of return in commercial outlets, that is, inducements to change behavior which are clearly not "benefits" --it still would seem that much "institutional aid" serves entirely analogous purposes. Yet we label one type of assistance and not the other. Why we accept the distinction is, I think, an interesting political question.

While devoting our attention to the issue of delivery mechanisms, we have virtually ignored the issue of delivery objectives. In developing student assistance programs and in calculating need, we have completely confounded those resources to be used for achieving educational objectives--teaching and learning--with those to be used for social objectives--offsetting low income that results in large part from imperfections in other parts of the system. In evaluating assistance programs--judging which to keep, which to expand, which to inaugurate-- we have been asked to evaluate their effectiveness. But we cannot give a simple straightforward answer to the cricial question, How much student aid is spent for educational purposes? The debate over financing would clearly be more productive if we got past devisive labels by characterizing all support for education as "educational assistance" and if we identified much more precisely what goals are to be accomplished through what resources, by source, intermediate channel, and use.

In opposition to this argument for specificity, some sophisticated political practitioners have observed that action requires consensus, which in turn requires intentional lack of precision in the political process. Political feasibility, a concern that pervades every serious discussion of financing alternatives, is an area of study where we need considerable systematic help in order to advance the debate on financing still further.

Equity

Those who advocate increasing tuition at public institutions and targeting financial aid to needy students argue that the current system is inequitable because a higher proportion of middle- and upper-income families than of lower-income families send their children to college and, consequently, get a larger share of the benefits. The proposed changes, they conclude, will create a more equitable system.

I would argue that (1) this assessment of the equities in current financing mechanisms is incomplete, and (2) the proposed reform, far from bringing about a truly equitable arrangement, would introduce a whole new set of issues about equity.

First, to assess the current balance only in terms of benefits is inadequate in that the question of who pays for the costs of proucing those benefits is ignored. Middle-income and upper-income families indeed receive a disproportionate share of the benefits; but more complete analysis is likely to show that they also pay a disproportionate share of the costs. Further, the question of equity does not stop with who benefits and who pays but given the intergenerational nature of transfers of resources inherent in financing education, extends to when people pay.

A basic question of equity is, In achieving greater income equality, to what extent should we try to engineer the redistributive effects of the financing of education, as compared with alternative approaches via federal and state tax structures?

Thus, if inequities exist, the choice of remedy is not limited to raising the price of education to the current student generation (even if those increases are offset by increased aid to lower-income students) it includes the remedies of broadening the participation of lower-income students in the educational system and of drastically revising the tax structure to make it more truly progressive.

Second, the proposed "solution" is not a simple straightforward move in the direction of greater equity. Rather, it introduces another whole set of equity issues. Recent evaluations of the effects of new student aid programs have brought to light new concerns--some fundamental, some less so but still consequential. Let me illustrate by raising a few of the questions of equity to which we have become sensitized in the last year:

1. Student aid entitlements based on need are calculated by substracting from educational costs an expected family contribution, which is a function of family income, assets, additional employment expenses of families with more than one worker in the labor force, numbers of siblings, and unusual expenses. But which family should be considered in calculating the expected family contribution. In the past, the easy presumption was, of course, the parental family, and contribution rates were assessed according to parental family income, except where the student was independent of the parental family. Higher contribution rates are assessed against independent students, even though student family income may be low or zero. Moreover, though a dependent student's earnings from employment are not necessarily included as part of the parental family income in calculating expected family contribution, the earnings of the independent student are considered part of the student family income. The criteria for determining whether a student is independent have been set down in detail: Has the student lived at home for more than two weeks at any time during the previous two years? Has the student been claimed as a tax deduction by the parents? Now, however, it is possible that, to qualify for student aid, even affluent famillies will manipulate the situation so that their college-age children can claim independent status. How will the administrator of a need-based program find a simple and equitable way to distinguish legitimate from illegitimate claims of independence and consequent entitlement to assistance?

2. The child of affluent parents is denied aid, but the parents--perhaps because they believe in the value of self-sufficiency or because of other reasons--may not provide the support officially expected. Can the student then claim aid on the grounds of independent status? If the rules are applies stringently, probably not in most cases. Can the student press a claim for support against the

parents? The law has not yet been tested; but if the student is an adult, and given that the parents, in reverse circumstances, could not force education on their adult offspring, there again, probably not.

Such students would be faced with higher tuition, no outside, and no parental support. The alternative is self-support from employment. But consider: Employed students pay taxes on the income they use to support themselves in college--an equitable arrangement in relation to those similarly employed who do not chose to go to school, but an inequitable one in relation to those who have grants on which they pay no income taxes.

3. At an even finer grid of detail, equity requires consideration not only of relative income but of relative assets. What is equitable between, say, a skilled worker with a high income and low assets, and a farmer with low income and high assets? Does it matter, from the point of view of fairness, whether assets are liquid or illiquid? Whether they are, for instance, in a mutual fund or in a house?

4. Let us add a time dimension, a dimension particularly relevant to the loan component of an aid package. Currently loan subsidies (in the form of deferred repayment of principal, or deferred interest, or lower interest) are awarded on the basis of current family income, but equity requires that we should consider ability to repay the loan which is a function of the student's future income. Very probably many students from middle-income families who study, for instance, social science will end up repaying the full cost of the loan out of a low income, whereas many students from a low-income families who, for example, study medicine will repay a much smaller amount on a partially subsidized loan out of a much higher income.

Such questions of fundamental equity in the current and the proposed financing mechanisms are endemic. We could probably arrive at acceptable consensus about either system. I simply want to underscore that the advocates of increased tuition offset with need-based student aid do not have all the arguments for equity on their side.

Strength of the Private Sector

Financial crisis has hit the private institutions particularly hard. In the five years after 1967-68, which marks the start of a period of sustained crisis more than 100 private institutions closed their doors. The rate of closing dropped considerably in 1972 and 1973, but it continued to include both four-year and two-year schools. The private share of total enrollment has continued to decline from 30 percent in 1967-68 to 23 percent five years later. Private tuition continue to be thrust upward by costs. The dollar gap in tuition, between the private and the public schools increased from approximately $1,000 to $1,500.[1]

Discussion of the appropriate responses to the plight of the institutions in the private sector has evolved rapidly in the last year or so. Originally, spokesmen from the private sector pressed publicly for increases in public tuitions to reduce price competition from the low tuition schools--thus the opening volleys in the debate pitted the private schools and the public schools against each other as adversaries. Statesmen in the education world from both the private and the public domain began to see this posture as destructive and began to argue persuasively for policies of financing predicated on shared destiny. Educational associations of both private and public schools began to take official positions opposing raising tuitions in the public schools as a means of assisting the private schools, thereby reconfirming positions in favor of low tuition and committing them to search for more direct approaches to support of private higher education, extending consideration both to assistance channeled to the institutions or to the students. Considerable activity was stimulated to secure support for the private schools from state resources based on intellectual arguments about the values of preserving and enhancing educational diversity in this country, and cost-based arguments that it would be cheaper to support students in private schools than to expand public facilities.[2]

The original debate had first been carried on in national terms with very little assimilation of the fact diversity among the fifty states in the role of the private sector. The data shows that the proportion of private enrollment of total enrollment ranges from almost 60 percent in Massachusetts to zero in Wyoming.[3] School enrollment is, of course, generally concentrated where population is concentrated, but the concentration of private enrollment is even greater. Two states, Massachusetts and New York, account for one-quarter of all private enrollment. Adding the four states of Pennsylvania, California, Illinois and Ohio, the six states account for over one-half of total private enrollment. These observations brought into question a national policy of increasing tuition at public schools to help the private schools.[4] It makes little sense to argue that we should raise tuitions at public schools in Wyoming to help out private institutions in Massachusetts. If the proposal were reconstituted as a proposal to raise tuition in public schools in states where there was a strong private sector, we would find ourselves in a morass where the cost to the student at a public school depended on the fortuity of the presence of the private schools in the same state which would be hard to justify from a national standpoint.

Thus, consideration of the issue has shifted from a *national* policy, considering both public and private sources of revenue, to examination of *federal* approaches, recognizing the vast diversity among the states.

Affirmative Action

Progress of women in higher education has been painfully slow, and uneven. Women now constitute a smaller share of the students[1] and faculty[2] than they did forty-five years ago. Women students receive relatively fewer grants, loans, fellowship and teaching assistantships than do the men students.[3] Additionally, men held three times the number of professorships in 1972-73 than women held.[4] The greater the level of academic or administrative responsibility, the rarer is the presence of women in higher education.[5]

Economists, in general, elaborating theories of human capital, search for the cause of and solutions to the problems of discrimination largely in terms of the characteristics of the women rather than in the characteristics of society. In recognition of the need to overcome barriers of this limited perception of discrimination, leaders of the women's movement are beginning to push far beyond affirmative action conceived primarily in terms of enforcement of Executive Acts and equal opportunity legislation[6] to raising fundamental questions about the social and economic system itself.

Women in education are raising questions, for instance, about:

--the relationship between education and the choice of life styles

--or education as preparation for social change.

Ann Scott, Associate Executive Director of the American Association for Higher Education has posed the challenge as to "whether higher education will take a leadership role in the process of recycling women into society, in developing entirely new areas of employment for women and men, and in cushioning the shocks to the system of absorbing vast increases in women's labor force participation." She envisions the "possibilities of the universities creating laboratories to predict, influence, and serve the inevitable, fundamental changes that will occur in the social system."

Affirmative action may be of genuine benefit to men as well as women. For example, in the academic sphere, enforcement of the Equal Pay Act stimulated a large number of salary surveys on individual campuses--invariably, they found substantial differentials, on the average, between men and women staff members, that were not explained away by differentials in degrees held, quality of their educational background, publication rate, teaching ability, or longevity in position.

But beyond the differentials by sex, these studies developed evidence that, overall, across the system of academic salary administration, for men as well as for women, the relationship within departments, between stated determinants of pay within departments and actual pay is very weak.[7] Thus review of academic salaries may very well be in order for men as well as for women.

The connections between the rate of progress of the affirmative action front and financial conditions in higher education are direct. Currently at many institutions confronted with financial stringency and near-term prospects of slower growth of enrollment from regular college-age groups, greater balance by sex and race in employment must be achieved, not by hiring for additional positions, but by hiring for existing jobs.

It has been argued that progress in affirmative action has not been very rapid because there are not "qualified" women and minorities available for consideration. Therefore, affirmative action must operate not only on the demand side but on the supply side of the labor market.[8] While this may be appropriate for some highly specialized jobs--large numbers of somen seeking few jobs available have helped create the conditions conducive to the wage differentials women now suffer.

Inflation

Inflation has wrecked a devastating toll in higher education first eroding the financial position of institutions, faculty, and students. Costs to institutions of producing educational services have recently risen considerably faster than the general price level.[1] But colleges and universities, as non-profit institutions, are less adapted to coping with rapid cost increases than the profit-oriented firms in the industrial sector. Tuition prices and charges for room and board are set by colleges in advance of the academic year for publication in bulletins and for calculating entitlements to student aid; and state appropriations for education may be tied to a two-year legislative cycle. Planning and budgeting on the basis of historical rates of cost increase leaves institutions totally unable to cope with rapid upsurges in costs. Tuition levels are not easily changed in mid-year; the state legislatures may not even be in session to consider a request for supplementary appropriations to cover short falls resulting from inflation. This is in contrast with the profit sector which in general can make price and output changes more quickly to cover unexpected increases in production costs.

Though faculty salaries constitute a large component of the rising costs to institutions of producing educational services, paradoxically, salaries have not risen in the last years as fast as the rate of consumer price increase--which has reduced the real dollar purchasing power of faculty salaries,[2] as shown in the accompanying chart.

At the sametime, costs to students of college (including tuition, room, board, books and supplies, and transportation) have risen sharply, more than forty percent, since the introduction of the need-based student aid programs. The students' cost increases have not been offset by commensurate increases in student aid. In fact, taking into account the impact of inflation and the broadening of eligibility for student aid programs to those enrolled in the non-collegiate sector of post-secondary education, the real value of per student awards of student aid went down each year from the late 1960s to 1972.

Consequently, at initial levels of underfunding, the new Basic Grants program did not effectively infuse increased amounts of student aid into the financial system but merely restored the situation of 1970, several years earlier.

Since the cost increases have not been accompanied by commensurate increases in student assistance, a greater share of the cost burden has been shifted to students who have been forced to finance the inflationary surcharge by going into heavier debt.

The crush of national economic inflation has left colleges and universities in heightened financial straits, faculty members with decreased purchasing power, and students in deeper debt.

The overall impact of inflation has been to shift the shares of financing. Future discussion of how to deal with inflation should, I would argue, be based on the premise that each source of revenue, the size of which is determined initially on program-related rationale, should bear a proportionate share of the burden of inflation--and that inflation should not be used as an occasion to shift cost shares, particularly not to students.

Federal-State Relations

From a national point of view, vesting primary responsibility with the states for the support of higher education results in persistance of the vast differentials among the states in the provision of educational opportunity to the people depending on where they live. On the other hand, imposition of national standards and redistribution of resources among the states is strongly resisted by the states which would benefit least.

States differ substantially in their participation rate in federal educational programs. Perversely, from the standpoint of equalizing opportunity, the high income states have the highest per student awards of financial assistance.

It is possible that in some instances the state allocation formulas under which existing student aid funds are distributed operate to enlarge rather than to reduce the disparaties in educational opportunities among states. It would be an opportune time to determine whether the disparities are fewer under the new Basic Grants program where the assistance is provided directly to the student on the basis of entitlement as compared with the patterns of assistance under the allocation formulas of the institutionally-based programs. But little serious attempt had been made to identify and deal explicitly with the state or regional impacts of national educational programs or federal/state relations until the Education Amendments of 1972.

The Education Amendments of 1972 marked a clear change in federal policy with respect to the role of states and state agencies in the administration of higher education programs.

Prior to these amendments, Higher Education Act programs defined several ways in which states were to be involved in federal programs:

For example: In administration of categorical programs, each of the following programs has a requirement for formation of a state planning body as a prerequisite for receipt of federal program grants:

Title I - Community Service and Continuing Education

Title VI - Undergraduate Instructional Equipment
Title VII, part - Undergraduate Academic Facilities Grants

The institutional-based student aid programs (EOG, CWS, NDSL) each contained allotment formulas which include consideration for differences among states with respect to population, enrollment, children from low-income families, etc.

A number of states also had state student loan programs integrated with the Federal Guaranteed Student Loan Program.

In general, however, the Higher Education Act of 1965 lacked any clear indication of a federal/state partnership in the carrying out of national policy with respect to financing postsecondary education. To a large extent, existing programs were administrated on an institutional/federal basis.

Stimulated in part by the Education Commission of the States, the associated organizations, the State Higher Education Executive Offices, and the National Governors Conference, Congress enacted legislation amending the Higher Education Act of 1965 to enhance the role of the states. States were enabled to set up postsecondary planning commissions to plan and coordinate activity within the states. Modest federal support was authorized but not funded for establishing the Commissions.

Section 1202 and related provisions evolved from a general Congressional feeling that:

- states should be given incentives for and be encouraged to undertake comprehensive planning for all of postsecondary education and that this palnning should be accomplished with direct participation not only of the general public, but all postsecondary education.
- the federal government should encourage states to build bridges between and among "segmental" planning efforts.
- that, where possible, administration of federal programs at the state level should be consolidated.

The Governor of each state was permitted to designate either an existing agency or create a new one to perform the planning functions.

Early efforts to develop regulations for implementation of 1202 State Commission by the USOE were greeted with a storm of controversy stemming primarily from the fear that these commissions might force significant changes in the coordination and governance of postsecondary education in many states. The "broadly and equitably representative" provision threatened to force many states to change the composition of existing boards or to designate new agencies which might then become new layers of bureaucracy. The situation was further complicated by the virtual lack of a clear indication of Congressional intent: Section 1202 had emerged from the Conference Committee without having been subject to debate, a scrutiny normally accorded major legislative innovations. In fact, hearings were never held on the Commissions.

The educational institutions were extremely apprehensive--preferring to deal directly with the federal agencies rather than with a newly created bureaucratic layer. The public institutions were concerned about the possible requirements of sharing budget resources with the private schools, and the four year schools were concerned about encroachments of the two year community colleges and vocational and technical schools in the postsecondary system.

Congress, in authorizing the Commissions, originally envisioned that the federal government would have a leadership role. But the Administration became concerned that the planners coordinating the education programs at the state level would become advocates of them at the federal level, thus creating additional pressure groups to lobby at the precise time the Administration sought to consolidate and/or eliminate some of the categorical programs.

In March 1973 the Administration indefinitely postponed implementing the 1202 State Commissions claiming that since the categorical programs related to the Commissions were not included in the President's budget, there was no need for the Commissions. Indirectly, the controversy surrounding early implementation of the program may well have had something to do with the decision.

But then when the President signed into law the appropriations for fiscal year 1974 for the Departments of Labor and Health, Education, and Welfare, a commitment was made to proceed with implementation. On March 1, 1974, Education Commissioner Ottina invited the Governor to designate or establish 1202 State Commissions to become eligible for funding under Section 1203 - Comprehensive Planning. Forty-four states, the District of Columbia and several territories responded and therefore shared in the distribution of the approximately $1 million available for this program.

Size of the Higher Educational Sector

One of the most fundamental of all issues relating to the financing of higher education, is, What is the optimal, or most appropriate, size of the higher education sector? A corollary question is, Who in a society such as ours should decide, and on what basis? It is an issue closely connected to the issue of access.

Much of the pressure to raise tuitions emanates from those who assert, explicitly or implicitly, that the higher educational sector is too large, that marginal institutions are wasteful and unresponsive, that marginal faculty could better be employed elsewhere, and that marginal students are simply delaying entry into productive employment. Tuition levels far below full costs, in the private as well as the public sector, are seen as distorting students' choices and resulting in overeducation of particular people, an enlarged educational sector, and inefficient allocation of limited national resources. The view is, in summary, that higher education is turning out more educated people than the economic system can absorb.

But we should be wary of accepting that view. Determining the appropriate size for higher education by reference to the economic system's capacity for absorption is a Procrustean procedure. If, when the Morrill Act was under consideration in the early 1860s, employers had been polled about their capacity to absorb a more highly educated labor force, they would probably have looked at the jobs they had and declared that no more than an eighth-grade education was required; and our state university and land-grant college system might never have developed. The basic problem with tying forecasts of educational needs to the economy is that generally the forecasts are based on static assumptions; but labor force requirements are very much a function of technology and of the aspirations that people have for the quality of their lives--and education influences both of these in an extraordinarily dynamic way. For instance, forecasts of demand for teachers--and consequently of demand for teacher education, are based on the assumption that the ratio of students to teachers will remain unchanged. But currently that ratio is one teacher for every 24 pupils.[1] A commitment to the goal of lowering national average pupil-teacher ratio would drastically affect projections of oversupply or undersupply of teacher education. Or consider, as another example, what implications a national move to a four-day work week would have on educational requirements. From the middle of the nineteenth century to the mid-thirties, the average work week declined from about 50 to 60 hours to about 40 hours. Over the last four decades, the basic work week has remained relatively stable, though the annual work time has decreased slightly because of more paid holidays and longer vacations. But suppose that we as a nation decided to take more of our productivity gains in time rather than in money. Again, such a decision would drastically affect predictions of manpower supply and demand.

We need not only to improve our forecasting technology but also to ask the hard question of how we use this information. If we must take the risk of being wrong, then surely, as a matter of values, we might prefer to err on the side of too much, rather than too little, education.

Higher Education Among National Priorities

Federal budget outlays for education and training at all levels increased spectacularly from 1964 to 1968. In those three short years, expenditures more than tripled--from under $2 billion to over $6 billion.

Since 1968, however, the growth rate of spending for these functions has fallen to about half of what it was during the preceding four years. Typically, increases in expenditures for new social programs slow to longer-term and more sustainable growth rates after an initial period of rapid expansion as they reach increasing proportions of eligible populations. In this case, however, a significant part of the slowdown is attributable to the topping-off of federal outlays for higher education while outlays for other educational sectors and for manpower training programs continued to increase. As the accompanying chart and table indicate, federal outlays for higher education have increased comparitively little since 1968, despite the national commitment to broader access for low-income students, despite the growth in total enrollment, and despite inflation and higher tuitions.

In 1967, the annual outlays for manpower training and employment service and for higher education were roughly the same level: just over $1 billion. Six years later, spending for manpower training and employment service has risen to $3.3 billion, whereas spending for higher education has inched up to only $1.5 billion.

This comparison does not mean to imply that, in establishing the place of higher education among our national priorities, we should accept a forced trade-off in our federal budget between expenditures for higher education and other sectors of education or between education and manpower training. It does suggest that we should be aware of the relationships within the federal education budget, and between education and other sectors. Another question that we need to consider is, If major resources are with drawn from higher education, into what alternative activities will they be channeled? Welfare programs? Farm subsidies? Secret stockpiling of military arms? Development of the SST? We might, as a nation, want to consider that a 1.8 percent decrease in the outlays for defense spending in the 1972 federal budget would provide funds equivalent to a 100 percent increase in the level of federal support for higher education.

The Usefulness of Policy Analysis

Analyses of the issues in financing higher education have been performed chiefly by economists, or at least by analysts using economic terms: costs, cost-pricing, benefits, effectiveness, productivity, optimum allocations, trade-offs, market shares. One egregious shortcoming of such analysis is the active inference that the policy conclusions flow, more or less inexorably, from the underlying analysis. But they do not. They flow through an intermediary black box of personal and societal values which have a political dimension.

The recent history of economics as a field of study is characterized by its invasion of other disciplines. In the vanguard of the expansionist activity is a particular subset of economists who are distinguished by the intensity of their commitment to market explanations of, and solutions to, social as well as economic problems. It is time that other disciplines--particularly political science, psychology and sociology staged a counterinvasion to illumine the extent to which the premises of economic analysis are value-laden.

The next phase in the national debate on financing higher education should expand openly and explicitly into the political domain. We must give more attention to political motivations and processes; to questions of how effectively education interests are represented, how constituencies are formed, what the politics of educational budgeting are; and, finally, we must take a hard look at the nature of the society we have, and we must decide on the kind of society we hope to have--all political questions.

Footnotes

Access

1. American Council on Education, Policy Analysis Service Student Aid Seminar IV, "New Concepts of Student Access," Washington, D.C., August 27, 1974.

Strength of the Private Sector

1. *U.S. Office of Education. Projections of Educational Statistics to 1982-82, 1973 Edition*. (Washington: Government Printing Office, 1974), pp. 109-110.

2. Richard M. Millard. "State Aid to Non-public Higher Education" *Higher Education in the States*, Vol. 4, No. 5, (Denver: Education Commission of the States, 1974) pp. 149-172.

3. Carol Van Alstyne, Cathy Henderson, Yi Tsien. "Diversity Among the Fifty States in Higher Education" Policy Analysis Service, American Council on Education, July 9, 1974, xerox.

4. There is some tendency now for tuitions at public institutions to be higher in those states where there is a large private sector, but the tuitions are still generally much lower than the private tuitions. Margaret Gordon, Carnegie Council on Higher Education. "Two Years of Low or No Tuition in Postsecondary Education" Report of work in progress to the American Council on Education, Policy Analysis Service Student Aid Seminar IV, August 27, 1974.

Affirmative Action

1. Women comprised 44 percent of the students in institutions of higher education in 1929 and only 41 percent of the 1970-71 enrollment. U.S. Office of Education, *Digest of Educational Statistics, 1973* (Washington: Government Printing Office) p. 84.

2. Twenty-seven percent of faculty members in 1929-30 were women; by 1972-73 the share had declined to 20.0 percent. *Digest, op. cit*, p. 84; Alan E. Bayer. *Teaching Faculty in Academe, 1972-73*, ACE Research Reports, Vol. 8, No. 2, 1973, p. 14.

3. Bayer, *op. cit.*, p. 27.

4. Bayer, *op. cit.*, p. 23.

5. Richard A. Lester "An Analysis of Discrimination in University Faculties", speech at Duke University, April, 1974. xerox, and *Antibias Regulation of Universities*, (New York: McGraw-Hill, 1974).

6. Ann Houston "The Costs of Affirmative Action: A Proposal for Study", American Council on Education, xerox, 1974. Based on Bernice Sandler "Sex Discrimination, Educational Institutions, and the Law: A New Issue on Campus", *Journal of Law and Education*, Vol. 2, No. 4, Oct. 1973

7. David A. Katz. "Faculty Salaries, Promotions, and Productivity at a Large University" American Economic Review, Vol. 63, No. 3, June 1973, pp.469-477.

8. Lester, op. cit.

Inflation

1. U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Wealth Division, Personal Consumption Expenditure Section, Estimated Rates of Price Increase In Services & Commodities Related to Student Changes. Unpublished data. August 29, 1974; and Hans H. Jenny & G. Richard Wynn. The Turning Point: A Study of Income & Expenditure Growth & Dirstribution of 48 Private Four-Year Liberal Arts Colleges, 1960-1970 (Wooster College Press, 1972), pp. 13-16, 26-29.

2. American Association of University Professors, "Surveying the Seventies: Report on the Economic Status of the Profession, 1972-73," in the AAUP Bulletin. June 1973. pp. 188-258; and "Hard Times: Report on the Economic Status of the Profession, 1973-74," AAUP Bulletin, Summer Issue. 1974. pp. 171-244, and Walter Adams, "The State of Higher Education: Myths and Realities," pp. 119-245 of the same issue of the AAUP Bulletin.

Size of the Higher Education Sector

1. U.S. Office of Education. Projections of Educational Statistics to 1982-83, 1973 Edition, (Washington: Government Printing Office, 1974) p. 66. Many authorities consider these ratios much too high for effective teaching and learning.

AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

There are few unbiased observers of the current scene in American postsecondary education. While some might suggest that the confusion of conflicting educational priorities needs to be untangled, most would undoubtedly agree that questions related to the financing of postsecondary education should be promptly and thoroughly aired and that viable and constructive proposals for both short- and long-term action should now be formulated.

The several reports, including that of the National Commission on the Financing of Postsecondary Education, with which those of us in postsecondary education have been concerned during the past few years, have provided useful recommendations and analytical models. They reflect the basic research which proves so necessary in the formulation of education policy. In some cases, they make strong recommendations for improvements in on-going programs or modes of administration. In others, they propose basic reform. We welcome these reports while at the same time agreeing or disagreeing with them on specific proposals.

The American Association of University Professors (AAUP) believes that the current debate over the sources of funds for postsecondary education is part of the larger issue of the priority assigned to postsecondary education. That priority appears to rise or decline in mercurial fashion according to the exigencies of the moment. In the post-Sputnik era, higher education was at the top of the list of national priorities. By the 1970s, however, it has fallen sharply in the wake of the heavy costs of war, growing inflation and a declining economy. Thus, while the need for postsecondary education is as great now as it was in the 1960s, the allocation of national resources has been substantially revised. Postsecondary education has been dropped to a relatively low priority.

As a result, the projected funds that it will require to carry out its responsibilities in the remaining half of this decade do not appear to be adequate.

We recognize the potential for economic disaster which currently confronts us. In a period of worsening inflation and increasing scarcity, there are those who argue for substantial overall reductions in the public and private funding of postsecondary education. Not only do we reject this position, but we warn of its tragic implications. The social and economic impact upon our society of an undertrained, underemployed and underutilized generation would have long-term negative consequences.

Thus, the American Association of University Professors believes that the first and most urgent matter of concern to our national, state and local governmental leadership should be the renewal of the high priority assigned previously to postsecondary education. That renewed priority can be expressed in terms relevant to the current needs of this nation. "The deep-rooted societal crisis that we are experiencing can be resolved," according to former national AAUP President Walter Adams of Michigan State University, "if at all, not by a cutback in the supply of trained intelligence and humanistic understanding, but by the immediate mobilization of all the research resources at our command as well as the accelerated recruitment and education of the intellectual talent our pluralistic society can offer." We agree with Professor Adams that this is the time for "a comprehensive investment program in human capital, utilizing the best intellectual resources of this nation." Its purpose is "to train a new breed of person and to search for new forms of knowledge to assure man's survival in a complexly interdependent society and an inextricably interdependent world."

The second matter of concern, we believe, is the reallocation of national resources in order that the new and urgent high priority for postsecondary education be effectively implemented. As a nation we have established certain desirable goals. We are committed to a goal of equal opportunity for all citizens. In postsecondary education, students from low-income families are encouraged to further their education beyond high school, assisted by grants and loans. But the funds made available to these programs are grossly inadequate. Beginning with the states in the early nineteenth century and the federal government in 1862, there has been a national commitment to provide free or low-cost public higher education. But today the sharply rising costs of education at public institutions endanger that principle established over 100 years ago. Our national commitment to public higher education has given us a sympathetic understanding of the significant role which private institutions play in our pluralistic society. Thus, in the reallocation of national resources, students and their institutions require primary consideration.

Our position concerning assistance to students is premised on the conviction that no qualified person should be denied a college or university education solely because of financial reasons. We applauded the introduction of the entitlement principle in the Education Amendments of 1972. In recent years, special attention has been devoted to those grant and loan programs which are designed to assist students from low-income families. But a broader perspective has led us to urge that both government and the community of higher education consider seriously the creation of a program of universal support for students in higher education patterned after the GI Bill of Rights.

We believe that at the present time the highest priority should be assigned specifically to the student assistance programs administered by both the federal and state governments. At almost all levels of government, they are designed to help us move quickly toward the desirable goals of equal educational opportunity and equal access to courses of study for all academically qualified individuals.

As student assistance programs have evolved during recent years, there has been an unnecessary conflict between the campus-based programs and the direct student aid programs. We believe that both programs serve their respective purposes well and that both are necessary in order to provide financial stability for students as well as the institutions which enroll them.

Institutional aid should involve the essential aspects of the educational program: teaching, research and library resources. Specialized institutions, including community colleges and developing institutions, and specialized programs, including the college library resources program, have properly required increased attention in recent years. Along with programs related to the training of health professionals, they will require increased funding.

Finally, we believe that there are two necessary ingredients to the potential success of any education policy: (1) the inclusion of the faculty in the planning and budgetary processes and (2) continued recognition of the financial and educational integrity of postsecondary institutions. In 1966 the American Council on Education, the Association of Governing Boards, and our association drafted the Statement on Government of Colleges and Universities that firmly recognized the traditional principle of shared responsibility in carrying out the goals and purposes of an education institution. In implementing that principle, faculties actively participate in the development of those policies which serve to make institutional programs more effective. Both public and private supporters of postsecondary education have recognized that the most effective education programs are developed under conditions free from infringements on institutional integrity.

9/20/74

A REPORT ON THE HIGHLIGHTS OF THE FIRST CONFERENCE

HELD IN SAN FRANCISCO

September 30-October 1, 19[illegible]

Controller, State of California, Houston I. Flournoy, and candidate for governor, opened the conference advocating a five-point anti-inflation program. Flournoy urged:

(1) A three year degree program for undergraduates;

(2) greater use of educational television;

(3) better use of physical facilities;

(4) implementation of the "extended university" concept;

(5) development of reasonable productivity standards for faculty and administrators.

Richard Soderberg, from the California Department of Finance, reported in a general session on a survey he had conducted of eight neighboring states which indicates that state budget officers consider funding for higher education a relatively low priority.

Speaking on the fiscal health of the federal government, William Robinson, Congressional Research Council, Library of Congress, suggested that the most viable source of governmental fiscal strength is at the state level, not the federal or local levels. But state legislators Howard Cherry from Oregon, Leroy Greene from California and Gordon Sandison from the state of Washington, did not share his confidence that state level finances represent such fiscal health.

Several postsecondary institutional presidents called for reassessment of the relative priority for education. President Stanford Cazier,

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California State University, Chico, cited the need for improved output measures thereby enhancing the reassessment processes. Others pointed to the many societal and individual accomplishments made possible by the investments in postsecondary education.

Many conference participants saw a need for addressing certain public concerns about postsecondary education, relative to financing. Such concerns included accountability issues, greater educational opportunity for all potential postsecondary consumers and improved assessment techniques and information bases in order that better judgments might be rendered in the decision making processes relative to postsecondary financing.

RFC:sjc
10/23/74

A REPORT ON THE HIGHLIGHTS OF THE SECOND CONFERENCE HELD AT THE UNIVERSITY OF NOTRE DAME CAMPUS

October 4-October 5, 1974

Congressman John Brademas, Indiana urged the development of more rational bases for analyzing policies for financing postsecondary education. He cited the report of the National Commission on the Financing of Postsecondary Education as stimulating searching dialogue for more rational bases, viewing it as an important first step. He encouraged the conference participants to build upon the work of the National Commission, the Carnegie Commission, the Newman Task Force, the National Board on Graduate Education, the Committee for Economic Development, and the National Commission on Nontraditional Study, giving more serious attention to proposals which can be put forward and justified.

Edward Gramlich, in his address, raised these questions: "Given the rising, or exploding, costs of college education, and the falling relative returns, is it right for state governments to keep footing such a large fraction of the bill for students from all income classes? Maybe there should be measures to encourage students to ask themselves whether they really want this college education so much?"

Financial aid directors and other workshop participants were recommending funding mechanisms, in terms of student assistance programs which target grant aid directly to students. There seemed to be consensus that while targeted grants are most effective in enhancing the national objective of universal access, insufficient monies continue as a problem area.

Some suggested limiting grant assistance only to students at public and private postsecondary institutions, excluding the proprietary sector.

Interests were expressed in the use of improved management techniques and models for planning purposes; but, current shortcomings were noted. Selected state level financing studies were noted with discussion centering on what might improve the state of the art for such state level studies. However, Harry Yamaguchi, graduate dean at Indiana State University, cautioned the conferees about seemingly simple solutions which might appear to provide for more efficient and effective ways for "managing" postsecondary education. He cited the complexities of the management structure from the localized, or departmental level to the statewide and, in some instances, to the national level, with varying levels in between. Many participants seemed to agree.

RFC:sbb

10/25/74

A REPORT ON THE HIGHLIGHTS OF THE THIRD CONFERENCE

HELD IN DENVER

October 30-October 31, 1974

Douglas Jones, an economist with the Congressional Research Division, Library of Congress, observed that "setting priorities" has taken on a new connotation. It still implies selection of major directions or programs, but "setting priorities" has moved from primarily a managerial and political concept to primarily the economic one of fiscal squeeze. At the same time, he noted that the public is asking harder questions about government programs and requiring measures of performance and tougher evaluations to see if program objectives are in fact being met.

Ben Lawrence, Director of the National Center for Higher Education Management Systems, observed however, that educators have not only failed to take the time to toot their own horn, but have not even tried to measure many of the good effects that postsecondary education has on individual students and on the nation.

Workshop participants debated and reviewed strategies and alternatives for developing postsecondary financing policies, sensitive to emerging economic constraints and increased public scrutiny. Development of more rational approaches for presenting, justifying and defending postsecondary education policies and accomplishments was seen as a first priority for education leaders, according to state legislators, state budget personnel and other state leaders in attendance.

RFC:sjc
11/8/74

A REPORT ON THE HIGHLIGHTS OF THE FOURTH CONFERENCE
HELD IN ATLANTA, GEORGIA
November 18-November 19, 1974

Economist Kenneth Quindry, in reporting on the fiscal capacity of governments to support public services, noted that most tax structures that support postsecondary education are either regressive, or, at best, mildly progressive. The result is that low-income taxpayers contribute a greater share of their disposable income either as taxes to support postsecondary education or as fees to support their dependents in colleges and universities. Moreover, the percentage of college age citizens in the low income groups who attend institutions of postsecondary education is less than that in middle and high income groups. Taxes per disposable income supporting each student is even more unevenly distributed than are the family taxes as a percentage of disposable income. More equitable financing is needed, he concluded.

Miles Fisher, in discussing the impacts of financing policies and the absence of adequate and complete follow-through, observed the following: "Every advocate of equal educational opportunity with access, choice and achievement must speak to the issues for this may be our 'last opportunity' to modify the direction of some deep seated trends that will consign blacks, minorities and other low socioeconomic populations to nonessential positions on the periphery of the mainstream of these United States without the ability, resources, insight, foresight or fortitude to summon their limited resources to address the relevant problems and issues."

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Issues discussed in the Workshop Sessions included:

- How can the need for good institutional management and leadership best be met, for example, for sharing resources with other institutions, using available resources to best advantage, fostering retention instead of expansion of the student population, and for promoting reliance on state rather than federal funds?
- To what extent is institutional aid required to provide for compensatory services, as opposed to student aid?
- To what extent does student aid foster unethical recruitment practices and what can or should be done about them?
- What methods of accountability can state governments (including legislatures) use to decide on which institutions and programs to support, for example indicators of educational quality and comparative data on cost per student?

State legislative leaders attending, encouraged improving the information bases of postsecondary education.

RFC:sbb